

Nquthu Local Municipality



# Nquthu Local Municipality Integrated Waste Management Plan

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**FINAL**

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# Nquthu Local Municipality Integrated Waste Management Plan

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## List of Abbreviations

APPA	Atmospheric Pollution Prevention Act.
ASP	Africa Stockpiles Programme.
DAEA	Departement of Agriculture and Environmental Affairs

DEA	Department of Environmental Affairs.
DM	District Municipality.
DO	Department of Health.
DoE	Department of Education.
DWA	Department of Water Affairs (formerly DWAF).
DWAF	Department of Water Affairs and Forestry.
DPW	Department of Public Works.
ECA	Environment Conservation Act (73 of 1989).
EPWP	Expanded Public Works Programme
eWASA	e-Waste Association of South Africa.
FBRR	Free Basic Refuse Removal.
GDPR	Gross Domestic Product per Region.
HCRW	Health Care Risk Waste.
HCW	Health Care Waste.
HWMP	Hazardous Waste Management Plan.
IDP	Integrated Development Plan.
IDZ	Industrial Development Zone.
IEM	Integrated Environmental Management.
IPWM	Integrated Pollution and Waste Management.
IT	Information Technology.
IWM	Integrated Waste Management.
IWMP	Integrated Waste Management Plan.
IWMSA	Institute of Waste Management South Africa.
LA's	Local Authorities (Local and District level authorities).
LM	Local Municipality.
MEC	Member of Executive Council.
MIIU	Municipal Infrastructure Investment Unit.
NLM	Nquthu Local Municipality.
MRF	Material Recovery Facility.
NEMA	National Environmental Management Act.
NEMWA	National Environmental Management: Waste Act (59 of 2008).
NHA	National Health Act (61 of 2003).
NWMS	National Waste Management Strategy.
OHSA	Occupational Health and Safety Act (85 of 1993).
PCBs	Polychlorinated Biphenyls.
PE-HD	Polyethylene high density.
PE-LD-	Polyethylene low density.
PET	Polyethylene Terephthalate.
PIWMP	Provincial Integrated Waste Management Plan.
POP(s)	Persistent Organic Pollutant(s).
PP	Polypropylene.
PS	Polystyrene.
PSC	Project Steering Committee.
PUDSS	Permissible Utilisation and Disposal of Sewage Sludge.
PVC	Polyvinyl Chloride.
RDP	Reconstruction and Development Programme.
ROSE	Recycling Oil Saves the Environment.
RSA	Republic of South Africa.
SABS	South African Bureau of Standards.
SANBI	South African National Biodiversity Institute.
SATRP	South African Tyre Recycling Process Company.
SAWIC	South African Waste Information Centre.
SIDA	Swedish International Development Cooperation Agency.
UDM	Umzinyathi District Municipality
UN	United Nations.
WHO	World Health Organisation.
WIS	Waste Information System.
WMO(s)	Waste Management Officer(s).
WRC	Water Resource Commission.
WWTW	Waste Water Treatment Works.

## Definitions

Basic refuse removal	A baseline service level as established under Clause 9.1 of the National Policy of Basic Refuse Removal to indigent Households.
Best Practicable Environmental Option	The outcome of a systematic and consultative decision-making procedure. The option that provides the most benefit and the least damage to the environment (across air, water and land) as a whole, at acceptable cost, in the long term as well as in the short term. (NEMWA, 2008).
Best Practice	Process, technique, or innovative use of technology, equipment or resources that has a proven record of success in providing significant improvement in cost, schedule, quality, performance, safety, environment, or other measurable factors which impact on an organisation.
Bioremediation	Process whereby natural organisms (e.g., bacteria, fungi or plants) or enzymes are used to degrade contaminants.
Buy-back centre	A centre where people sell recyclable material they have collected. Recycling companies buy recyclable materials from the buy-back centres and pay only for the materials they can use. (Draft Municipal Waste Sector Plan, 2011).
By-law	Legislation passed by the council of a municipality binding in the municipality on the persons to whom it applies (Municipal Systems Act, 2000).
Carcinogen	A Chemical substance or mixture of chemical substances which induce cancer or increase its incidence when inhaled, ingested or absorbed through the skin (SANS 10234, 2007).
Clean Production	The continuous application of integrated preventative environmental strategies to process, products and services to increase overall efficiency and to reduce the impact of such processes, procedures and services on health and the environment (NEMWA, 2008).
Communal Collection Point	These are temporary sites and consist of skips or shipping containers receiving <u>general domestic waste, garden waste and bulky waste</u> . They are placed in peri-urban communities which do not receive a kerb-side collection service, and which are typically far removed from the landfill sites.
Composting Facility	Facility for the aerobic decomposition of biodegradable organic matter to produce compost (Draft Municipal Waste Sector Plan, 2011).
Disposal	The burial, deposit, discharge, abandoning, dumping, placing or release of ant waste into, or onto any land (NEMWA, 2008).
Domestic waste	Waste excluding hazardous waste, that emanates from premises that are used wholly or mainly for residential, educational health care, sports or recreation purposes (NEMWA, 2008).
Drop-off centre	A facility where the public is able to drop off <u>garden refuse, recyclables and bulky waste.</u>
Duty-of-care principle	Any person handling or managing hazardous substances or related equipment is ethically responsible for applying the utmost care.
Environment	The surroundings within which humans exist and that are made up of- (i) the land, water and atmosphere of the earth (ii) micro-organisms, plant and animal life (iii) any part of combination of (i) and (ii) and the interrelationships among and between them: and (iv) the physical, chemical, aesthetic and culture properties and conditions of the foregoing that influence human health and well-being: (NEMA, 1998)
General waste	Waste that does not pose an immediate hazard or threat to health or to the environment, and includes— (a) domestic waste; (b) building and demolition waste; (c) business waste: and (d) inert waste. (NEMWA, 2008)
Hazardous waste	Any waste that contains organic or inorganic elements or compounds that may, owing to the inherent physical, chemical or toxicological characteristics of that waste, have a detrimental impact on health and the environment.(NEMWA, 2008)
Incineration	Any method, technique or process to convert waste to flue gases and residues by means of oxidation (NEMWA, 2008).
Industry	Includes commercial activities, commercial agricultural activities, mining activities and the operation of power stations; (NEMWA, 2008)
Inert waste	Waste that

	<p>(a) does not undergo any significant physical, chemical or biological transformation after disposed</p> <p>(b) does not burn, react physically or chemically biodegrade or otherwise adversely affect any other matter or environment with which they may come into contact and</p> <p>(c) does not impact negatively on the environment, because of its pollutant content and because of the toxicity of its leachate is insignificant (NEMWA, 2008)</p>
Landfill	Site for the controlled disposal of waste materials (Draft Municipal Waste Sector Plan, 2011)
Minimisation	When used in relation to waste, means the avoidance of the amount and toxicity of waste that is generated and, in the event where waste is generated the reduction of the amount and toxicity of waste that is disposed of (NEMWA, 2008)
Minimum Requirements	Refers to the Minimum Requirements series of documents relating to the handling, classification, treatment and disposal of general and hazardous waste, published by DWAF in 1998 and updated from time to time.
Materials Recovery Facility (MRF)	A facility where waste is temporarily stored and ideally sorted, before it is transported more economically to either recycling centres or landfills (Draft Municipal Waste Sector Plan, 2011)
Nquthu Local Municipality (NLM)	The local authority administrating the Nquthu Local Municipality.
Policy	Provides guidance for legislation and administration. Does not refer to the development of implementation plans; does not refer to operational issues; does not define roles and responsibilities.
Polluter Pays Principle	The Polluter Pays Principle is a principle in <u>international environmental law</u> where the <u>polluting party</u> pays for the damage done to the <u>natural environment</u> .
Precautionary Principle	<p>The precautionary principle permits a lower level of proof of harm to be used in policy-making whenever the consequences of waiting for higher levels of proof may be very costly and/or irreversible:</p> <p>Where a risk is unknown; the assumption of the worst case situation and the making of a provision for such a situation; and</p> <p>Principle adopted by the United Nations Conference on the Environment and Development (1992) that, in order to protect the environment, a precautionary approach should be widely applied, meaning that where there are threats of serious or irreversible damage to the environment, lack of full scientific certainty should not be used as a reason for postponing cost-effective measures to prevent environmental degradation.</p>
Recovery	The controlled extraction of a material or the retrieval of energy from waste to produce a product (NEMWA, 2008).
Recycle	The process where waste is reclaimed for further use, which process involves the separation of waste from a waste stream for further use and the processing of that separated material as a product or raw material (NEMWA, 2008).
Recycling Point	A facility where the public can drop off recyclables, no money is paid for the recyclables. Recycling points are usually found at schools, libraries and vehicle service stations. These facilities are owned by the private sector.
Re-use	To utilise articles from the waste stream again for a similar or different purpose without changing the form or properties of the articles (NEMWA, 2008).
Sharps	Items such as needles, syringes, blades of clinical glass, that are capable of causing cuts, abrasions or puncture wounds (Draft National Norms and Standards for the Storage of Waste, 2011).
Sustainable Development	The integration of social, economic and environmental factors into planning, implementation and decision-making so as to ensure that development serves present and future generations (NEMA, 1998).
Temporary Skips	These are large bulk skips placed in communities for receiving only surplus <u>garden waste and bulky waste</u> , which is not collected as part of the household collection service. These skips are provided in an attempt to discourage illegal dumping. ed.
Transfer stations	A facility where waste is temporarily stored, and ideally sorted before it is transported more economically to either recycling centres or landfills (Draft Municipal Waste Sector Plan, 2011).
Treatment	<p>Any method, technique or process that is designed to</p> <p>(a) change the physical, biological or chemical character or composition of a waste; or</p> <p>(b) remove, separate, concentrate or recover a hazardous or toxic component of a waste; or</p> <p>(c) destroy or reduce the toxicity of a waste</p> <p>in order to minimise the impact of the waste on the environment prior to further use of</p>



	disposal (NEMWA, 2008).
Waste	Any substance; whether or not that substance can be reduced, re-used, recycled and recovered; (a) that is surplus, unwanted, rejected, discarded, abandoned or disposed of; (b) which the generator has no further use of for the purposes of production; (c) that must be treated or disposed of; or (d) that is identified as a waste by the Minister by notice in the <i>Gazette</i> , and includes waste generated by the mining, medical or other sector, but (i) a by-product is not considered waste; and (ii) any portion of waste, once re-used, recycled and recovered, ceases to be waste (NEMWA, 2008).
Waste Avoidance	Preventing waste generation altogether (i.e. zero waste generation).
Waste Co-operative	An enterprise jointly owned and managed by its employees, which provides waste-related services (e.g. litter-picking, street sweeping) to the communities as per contract with an authority. They are envisioned to bring about an improved feeling of ownership and responsibility in communities and generate entrepreneurship in previously disadvantaged communities.
Waste disposal facility	Any site or premise used for the accumulation of waste with the purpose of disposing of that waste at that site or on that premise (NEMWA, 2008).
Waste Exchange	The activity that takes place when waste is exchanged between companies, individuals or organisations, in order for it to be of mutual benefit to both parties. Waste from one could even be raw materials for the other.
Waste Generation	The weight or volume of materials and products that enter any given waste stream before recycling, composting, land filling or combustion takes place. Can also represent the amount of waste generated by a given source or category of sources.
Waste Management Hierarchy	The Waste Management Hierarchy reflects the different waste management options, from reduction (more preferred) through to re-use, recycling, recovery, treatment/destruction, and lastly disposal (least preferred), that should all form part of an integrated waste management system (NEMA, 2008).
Waste Information System	A computerised database containing information about waste management organisations and agencies, as directed to be established as part of the implementation of the National Waste Management Strategy of South Africa.
Waste Management Licence	A license issued in terms of section 49 of the National Environmental Management, Waste Act 2009 (NEMWA, 2008).
Waste Management Officer	A waste management control officer designated in terms of section 10 (NEMWA, 2008).
Waste Management Services	Waste collection, treatment, recycling and disposal services (NEMWA, 2008).
Waste Reuse / Recovery	The recovery or reapplication of a package or product for uses similar or identical to its originally intended application, without manufacturing or preparation processes that significantly alter the original package or product. Recovery can also refer to the recovery of energy from waste.
Waste Stream	The total flow of waste falling under a particular waste category from activity areas, businesses units, and operations that is recovered, recycled, reused, or disposed of in landfills e.g. domestic waste, hydrocarbon waste, etc.
Waste Transfer Facility	A facility that is used to accumulate and temporarily store waste before it is transported to a recycling, treatment or waste disposal facility (NEMWA, 2008).
Waste Transporter	A company or individual that provides a commercial service as a transporter of waste, must be registered on the Nelson Mandela Bay Municipality's Waste Transporter System.
Waste Treatment Facility	Any site that is used to accumulate waste for the purpose of storage, recovery, treatment, reprocessing, recycling or sorting of that waste (NEMWA, 2008).

The definitions used in this report are taken from a number of sources:



- South African National Standard (SANS) (2007) Globally Harmonized System of Classification and labelling of Chemicals (GHS)
- DEAT. (2009). National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) National Domestic Waste Collection Standards
- National Environmental Management Act No 62 of 2008
- Local Government: Municipal Systems Act, 2000
- DEA (2011) Draft Municipal Waste Sector Plan
- National Environmental Management: Waste Act 59 of 2008: National Norms and Standards for the Storage of Waste.

# 1 Introduction

## 1.1 Background

The Nquthu Local Municipality (NLM) commissioned an Integrated Waste Management Plan (IWMP) in terms of its statutory obligation to provide for competent waste management to protect human and environmental health within the local municipality area. GIBB (Pty) Ltd (GIBB) was appointed to compile the first generation IWMP for the NLM. This report constitutes the first standalone IWMP for the NLM and covers a five year period from 2015 – 2020.

The last few years have seen South Africa taking significant steps towards improved waste management at a policy, legislation and planning level; most significantly with the promulgation of the National Environmental Management: Waste Act 59 of 2008 (hereafter Waste Act), the revised National Waste Management Strategy GN 344 of 2011 (NWMS) and a number of guidelines which have been published. In terms of Schedule 5B of the Constitution of South Africa, 1996 Constitution (Act 108 of 1996) (the Constitution) waste management is a local government competency that must be executed to protect human and environmental health. Hence it is largely at the local authority level where waste policies and plans are physically implemented and hence it is vital that waste planning at this level receives the attention it deserves. Integrated waste management planning plays a key role in this.

## 1.2 Defining Waste and Integrated Waste Management Planning

### 1.2.1 A Definition of Waste

The Waste Act defines waste as any substance; whether or not that substance can be reduced, re-used, recycled and recovered;

- a) that is surplus, unwanted, rejected, discarded, abandoned or disposed of;
- b) which the generator has no further use of for the purposes of production;
- c) that must be treated or disposed of; or
- d) that is identified as a waste by the Minister by notice in the Gazette, and includes waste generated by the mining, medical or other sector, but
  - i. a by-product is not considered waste; and
  - ii. any portion of waste, once re-used, recycled and recovered, ceases to be waste.

A “by-product” is defined as a substance that is produced as part of a process that is primarily intended to produce another substance or product and that has the characteristics of an equivalent virgin product or material.

### 1.2.2 Integrated Waste Management Planning and IWMPs

The ‘integrated’ aspect of Integrated Waste Management Planning, means that all aspects of waste management are considered, from waste generation to waste reduction, recycling, treatment and disposal. This approach is illustrated in Figure 1 which shows the “waste hierarchy” as defined in the NWMS (DEA, 2011) illustrating how the majority of waste should be addressed via the lower tier activities, and how disposal should be applied as a last resort. It gives a clear illustration of the best environmental practice concerning waste management and aims to reduce the production of waste and to divert resources away from landfill sites where possible.

The NWMS states that the primary objective of integrated waste management planning is to: “integrate and optimize waste management so that the efficiency of the waste management system is maximised and the impacts and financial costs associated with waste management are minimised, thereby improving the quality of life of all South Africans.”

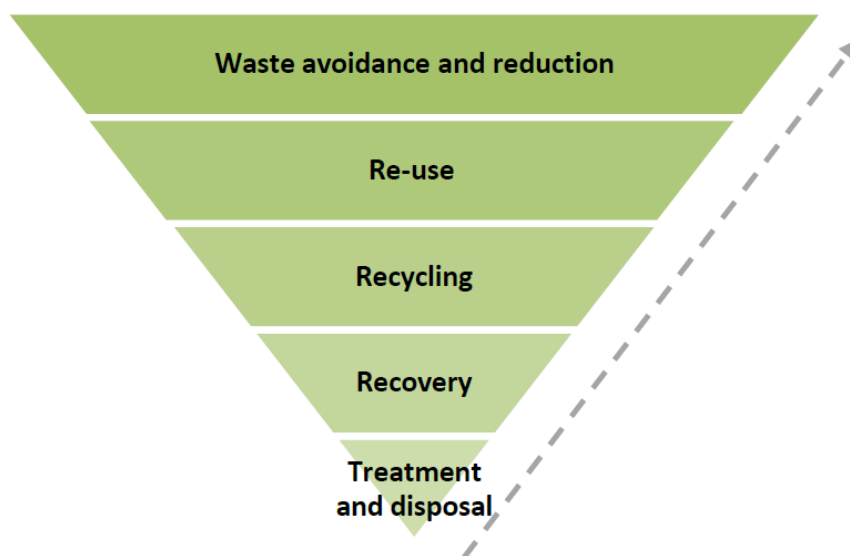


Figure 1: The waste hierarchy as per the National Waste Management Strategy (DEA, 2011)

An Integrated waste Management Plan (IWMP) is a plan which defines the vision, objectives and targets for the provision of waste management services. They are compiled by provincial and local authorities. IWMPs are revised typically on a five yearly cycle aligned to the review of the Integrated Development Plan (IDP) and to ensure the information remains up to date and to accommodate any new development in waste management or legislation. The formulation thereof should include identifying existing gaps in the provision of waste services, identifying objectives and targets, and defining actions and an implementation plan to realize these objectives.

### 1.2.3 Why Undertake an IWMP?

In terms of Section 11(4)(a) of the Waste Act, all provincial and local authorities are required to compile an IWMP, submit it to the MEC for approval, and include it in the local authority's IDP.

#### 1.2.4 What Should an IWMP Contain?

Due to the varying nature and scale of waste services in different local authorities, IWMPs vary in content and to some degree, in structure. Two key pieces of legislation define how IWMPs are to be compiled and what they should contain:

- National Environmental Management: Waste Act 59 of 2008: Section 12(1) of the Waste Act specifies the minimum content of IWMPs which includes:
  - A Situation Analysis including, amongst other things, an analysis of waste types, a description of services, and an indication of the number of persons not receiving waste collection services.
  - An indication of how the local authority intends to give effect to, amongst others, the objectives of the NEMWA, to provide for implementation of waste minimization and recycling, and best environmental practice.
  - Setting out of priorities and objectives for waste management.
  - Establishing targets for collection, minimization, re-use and recycling.
  - Setting the approach for the planning of new facilities.
  - Indicating financial resources required for giving effect to the plan.
  - Describing how the authority will give effect to the plan.
- Municipal Systems Act 32 of 2000: Section 25 of the MSA describes how plans such as the IWMP must be incorporated into the broader IDP of the local authority, which considers a range of areas such as building safe communities, promoting active participation in local government, building the local economy, employment creation and improvement of public services. The MSA also calls for IWMPs to be participatory processes.

This IWMP has fulfilled these requirements as best possible with the information and data available at the time of its compilation. The Policy and Legislation Review section of this IWMP (Appendix A) presents other policy and guideline documents which inform the principles and objectives of IWMPs.

All areas of waste management should be addressed by the IWMP, from the generation of waste to minimisation, reuse, collection and transportation, treatment, recycling and finally the disposal of waste. The IWMP should ultimately guide the local authority towards achieving reduced waste to landfill as per the waste hierarchy presented in Figure 1. The IWMP should also address institutional and financial arrangements pertaining to waste management so as to ensure sustainable management thereof.

### 1.3 Context of this IWMP

#### 1.3.1 Scope

This IWMP has been produced for NLM and is applicable geographically to all areas falling within the jurisdiction of NLM (see Figure 2). As a municipal plan, it is applicable to all directorates of NLM

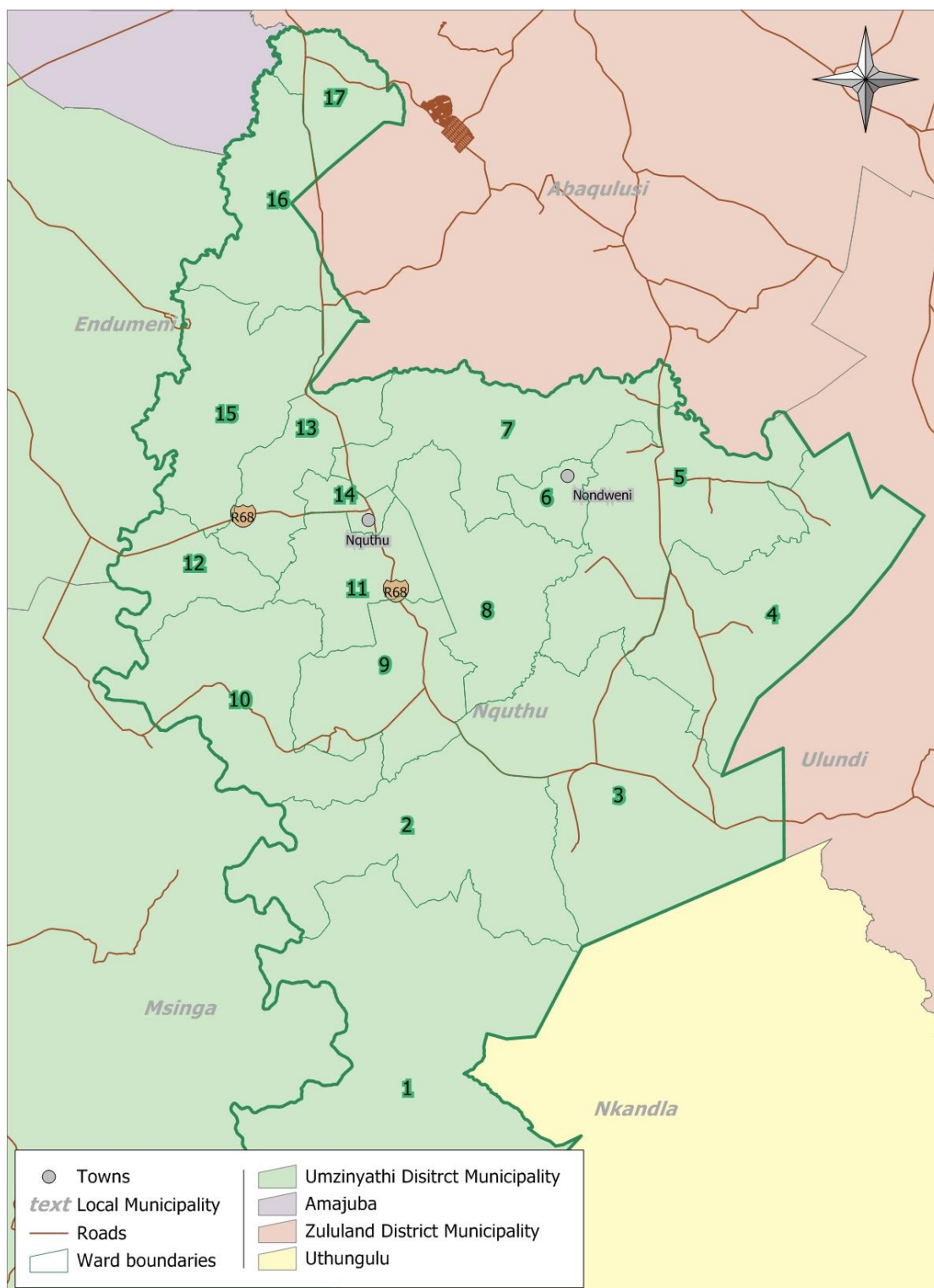


Figure 2: The jurisdictional area of the Nquthu Local Municipality and its main towns.

### 1.3.2 IWMP History in Nquthu Local Municipality

The first IWMP undertaken for the NLM area was in 2006 when waste management in the NLM was addressed in a district-wide IWMP that was compiled for the Umzinyathi District Municipality. This report constitutes NLM's first stand-alone IWMP.

### **1.3.3 Timeframes and Approval**

The IDP addresses gaps in waste management and proposed solutions to address these gaps. It is the intention is for this IWMP to be finalised and adopted by council in 2015. Thereafter the IWMP will be submitted to the MEC for approval. This IWMP is intended to inform the revision of the IDP however the 2012- 2017 NLM IDP has already been developed.

### **1.3.4 Policy and Context**

As previously mentioned, South Africa has made significant progress recently with drafting waste legislation and guidelines. A detailed description of these, as well as applicable international legislation, is presented in Appendix A. In order to understand the context of this plan, the key legislation and local policies applicable to this IWMP are introduced briefly below.

#### **(a) National Environmental Management: Waste Act 59 of 2008**

The Waste Act is South Africa's core waste legislation, and was promulgated 01 July 2009. The act covers a wide spectrum of issues including requirements for a National Waste Management Strategy, IWMPs, definition of priority wastes, waste minimisation, treatment and disposal of waste, Industry Waste Management Plans, licensing of activities, waste information management, as well as addressing contaminated land. A number of regulations have been promulgated under the Waste Act.

#### **(b) National Waste Management Strategy**

The first NWMS was published in 1999 by the then DEAT and the then DWAF. It was the first strategy for addressing South Africa's waste management challenges. The strategy effectively defines South Africa's vision for waste management highlighting themes such as "cradle to grave" management of waste products and the waste management hierarchy which encourages waste disposal only as a last resort.

The NWMS was revised in 2011 in line with Chapter 2, Part 1, of the Act which requires the establishment of a NWMS within two years of the Act coming into effect. Significant changes include the addition of "remediation" to the waste management hierarchy, and the consolidation of what was previously many different action plans into a single action plan.

#### **(c) Draft Municipal Waste Sector Plan (2011)**

This draft plan, published for comment on 6 April 2011, seeks to address poor waste management performance of municipalities and to "effectively" address the management of "backlogs" in municipal solid waste service delivery and infrastructure.

#### **(d) Provincial IWMP, Kwa-Zulu Natal (not yet published)**

The Department of Agriculture and Environmental Affairs, the Kwa-Zulu Natal Provincial authority responsible for waste management, drafted an IWMP in 2012 but the plan has yet to be gazetted. While the key focus of the plan addressed provincial performance, it does have implications for local authorities in Kwa-Zulu Natal (KZN). The following key objectives were highlighted:

- Move integrated waste management within the province forward towards a more sustainable state of affairs.
- Identify and document current problems, issues and gaps in waste management.
- Address waste management issues and gaps systematically and effectively.
- Ensure that the KZN provincial government implements all existing legislation requirements in terms of waste management, most notably the Waste Act.
- Provide a basis for the development, promulgation and/or review of provincial integrated solid waste management regulations that would regulate waste management within the province, as well as serve as a disincentive for poor waste management practices (if necessary).
- Describe the Status Quo of waste management in the context of the province.
- Guide, support and challenge district and local municipalities to implement integrated waste management effectively.
- Guide, challenge and implement incentives for private organisations within the province to implement best practice waste management.
- Define the basis for the introduction, maintaining and promotion of sound recycling initiatives within KZN.
- Promote, encourage and support public involvement and forums in all KZN provincial government related waste strategies and activities.
- Document procedures followed during the development of the IWMP.

(e) Nquthu Local Municipalities Integrated Development Plan

The NLM's present Integrated Development Plan (IDP) covers the period 2012 – 2017. The IDP recognises issues associated with waste management in the NLM. The following issues were identified with the current waste management services:

- A lack of refuse removal services.
- No formal waste sites within the NLM that can effectively deal with the waste.

(f) Umzinyathi District Municipality Integrated Waste Management Plan

The Umzinyathi District Municipality (UDM) IWMP, drafted in 2006, outlines the goals and objectives for the NLM

(i) Disposal Infrastructure Development.

Goal: Improve, develop and maintain infrastructure to comply with legislative requirements and municipal needs.

Objectives:

- Close and rehabilitate the Nondweni landfill site.
- Upgrade and improve management of Nquthu landfill site.
- Construct a proper transfer station at Nondweni landfill site.
- Compile operations manuals for transfer station.

(ii) Waste collection infrastructure.

Goal: Provide effective waste collection for each LM.

Objectives:



- Extend service to un-serviced areas in each LM.
- Replace and maintain collection fleet for service delivery in each LM.
- Standardise collection and optimise collection routes in each LM.

Goal: Provide effective waste collection for each LM.

Objectives:

- Extend service to un-serviced areas in each LM.

(iii) Institutional Capacity and Human Resources.

Goal: Provide effective waste management service for each LM.

Objectives:

- Effective structure and extension of human resources in LMs.
- Train staff in LMs.

(iv) Financial Resources.

Goal: Provide cost effective waste management service.

Objectives:

- Improve payment of service tariffs.
- Standardise tariff structure.

(v) Dissemination of Information/ Communication.

Goal: Capacity building through information sharing.

Objectives:

- Develop and maintain a waste information system.
- Contribute to inter municipal waste information workshops.
- Improve community awareness and education.

(vi) Management of illegal activities.

Goal: Minimise/ prevent illegal activities within LMs.

Objective: Develop penalty system for illegal dumping within municipal areas.

(vii) Waste Minimisation.

Goal: Decrease waste deposited on LM landfills.

Objectives:

- Encourage recycling activities within LM areas.
- Encourage waste minimisation within DM.
- Develop garden refuse strategy.

(g) Nquthu Local Municipality Stormwater and Waste Management By-Laws.

The current stormwater and waste management by-laws for NLM were drafted in 2009. The by-laws cover various aspects of stormwater management however they neglect waste management. No waste management issues are covered by the by-laws.

Without waste management by-laws in place the NLM cannot control littering or illegal dumping and hence it is essential that by-laws are drafted which focus solely on waste management. The by-laws need to be comprehensive and implementable for the NLM to comply with the provisions of the Waste Act. A schedule of fines should be included in the bylaws.

## **1.4 Context of Roles and Responsibilities**

National waste legislation, policy and guidelines place specific responsibilities onto local authorities. The Waste Act requires the provision of waste collection services including collection, storage and disposal. Local authorities are also required to facilitate recycling and manage waste information appropriately. The sections below detail these responsibilities for different levels of government.

### **1.4.1 National Government**

National government is tasked with establishing a national waste management strategy, including norms, standards and targets. National norms and standards may cover all aspects of the waste value chain, from planning to service delivery. A National waste management Strategy has been developed and a number of norms and standards have been published.

### **1.4.2 Provincial Government**

Provincial governments are tasked with the implementation of the national waste management strategy and national norms and standards, and may set additional, complementary provincial norms and standards. The Waste Act notes that these norms and standards must, amongst other things, facilitate and advance regionalization of waste management services. The Constitution requires Provincial Government to monitor and provide support to municipalities in the province and to promote the development of local government capacity.

### **1.4.3 Local Government**

Local governments are required to ensure the universal and sustainable delivery of services, subject to national and provincial regulation. In particular, they are required to maintain separate financial statements, including a balance sheet of the services provided.

The Constitution of South Africa and other legislation mandates refuse removal by municipalities in their areas of jurisdiction. The sub-function of solid waste management includes refuse removal, solid waste disposal and landfill, street cleaning and recycling. The National Domestic Waste Collection Standard requires municipalities to provide a weekly collection service to households. Two other key responsibilities include:

(a) Waste Management Officer

The Waste Act requires that all local municipalities appoint a waste management officer from its administration who is responsible for co-ordinating waste management in the municipality.

(b) IWMP

All municipalities must submit an IWMP to the MEC for approval. The municipality is also responsible for incorporating the IWMP into its IDP. Annual performance reports must be prepared in term of section 46 of the Municipal Systems Act (32 of 2000) and must contain information on the implement of the municipal IWMP.

In terms of section 75(1) of the Municipal Systems Act, a municipality must give effect to the provisions of the Constitution and must:

- Give priority to the basic needs of the local community.
- Promote the development of the local community.
- Ensure that all members of the local community have access to at least the minimum level of available resources and the improvement of standards of quality over time.

## 1.5 Approach to this IWMP

(a) Situational Analysis

A waste management strategy, plan, services and initiatives can only be effective if informed by adequate information. This is particularly relevant in the case of waste quantities and types. Effective planning for waste minimisation and recycling initiatives are dependent on such data. However, little information on waste quantities and types was readily available at the time of the compilation of this report. Information on waste management in the NLM gathered through literature reviews is summarised and discussed in the sections below.

The *Situation Analysis* section of report provides an overview of NLM and the present waste management activities undertaken by the municipality. It introduces the biophysical context, demographics of the NLM discusses its local economy and describes the present waste management services.

(b) Data Collection

Data was collected from the following sources:

(i) Literature Review

An extensive literature review pertaining to waste management in the area was undertaken as part of the situation analysis. This included a review the following documents:

- Nquthu Local Municipality (2009) Stormwater and Waste Management By-Laws.
- Nquthu Local Municipality (2013) Nquthu Local Municipality 2013/14 IDP Review.

- Umzinyathi District Municipality (2014) Draft 2014/15 IDP Review.
- KV3 Engineers (2006). Umzinyathi District Municipality Draft Integrated Waste Management Plan
- Parliament of the Republic of South Africa (2011) Announcements, Tablings and Committee Reports, No 163 – 2011 Third Session, Fourth Parliament.

#### (ii) Facility Inspections

GIBB visited both the landfill sites in the municipal area and met with the NLM staff on 10 – 12 June 2014. During the visit GIBB visited the NLM's municipal offices in Nquthu and the landfill sites in Nquthu (closed), Nondweni (operational) and the Endumeni Local Municipality's site in Glencoe (operational).

#### (iii) Staff Interviews

Interviews were conducted in face to face meetings with municipal staff on 10 - 11 June 2014 to gain an understanding of the issues they face regarding waste management and areas they feel require improvement. Interviews were held with the following:

- Director of Technical Services.
- Supervisor Waste, Roads and Drains.
- Refuse truck driver.
- Refuse truck assistant.
- Street cleaner.

#### (iv) Business/ Industry Interviews

Representatives from Shoprite, Boxer and Shoprite centre management were interviewed to understand their challenges and concerns with regards to waste services offered by the NLM.

#### (v) Project Steering Committee

A Project Steering Committee (PSC) was established to ensure that the process of developing this IWMP was well informed. The list below presents details of the project steering committee members. The steering committee formed the core group responsible for work shopping the objectives and targets for this IWMP.

**Table 1: Details of project steering committee**

Name	Organisation - Directorate
Mr Msizi Gcabashe	Director of Technical Services Nquthu Local Municipality
Nomumsa Khmalo	Risk Officer, Nquthu Municipality
Bongekile Mthimkhulu	Department of Environmental Affairs, Local Government Support to Umzinyathi District Municipality
Thobile Nyathi	Environmental Officer, EDTEA
Matsepo Khulu	Environmental Officer, EDTEA
Msizi Mazibuko	Technical Department, Nquthu Local Municipality
Mr Walter Fyvie	GIBB

Name	Organisation - Directorate
Ms Kate Parkinson	GIBB

### 1.5.2 Assumptions and Limitations

This situation analysis has drawn information from a number of sources including NLM records and information sourced from NLM staff interviews. It is assumed that the information is accurate.

## 2 *Situational Analysis*

### 2.1 Overview Description of Nquthu Municipal Area

#### 2.1.1 General Description

The NLM is one of four local municipalities within the Umzinyathi District Municipality (UDM). The NLM is in the western region of the UDM and is bordered by Abaqulusi LM and Emadlangeni LM to the north, Ulundi LM to the east, Nkandla LM to the south and Msinga LM to the west. NLM covers approximately 1,454 km<sup>2</sup> and the main urban centre is the town of Nquthu. Nquthu is accessed via the R68 which links Ulundi and Newcastle and Dundee.

Nquthu is composed of nine Traditional Councils:

- Sizamile
- Jama
- Khipinkunzi
- Emandleni
- Mbokodebomvu
- Vulindlela
- Mangwe-Buthanani
- Molefe
- KwaZondi

There are 17 wards in NLM, the geographic area of the wards is shown in Figure 2.

Nquthu serves as a provincial administrative centre. The offices of the Departments of Education, Agriculture and Environmental Affairs, Works, Health, Justice and Welfare, Transport, Safety and Security (Nquthu 2014).

#### 2.1.2 Demographics

##### (a) Population Profile

The population size of the NLM is 165,307 inhabitants according to the 2011 census (Stats SA, 2012). This number represents a decrease in the population size of -0.25% from the population of 169,419 in 2001. The population decline may be due to migration to other areas to find work or educational opportunities (Stats SA, 2013). In comparison the population of the Kwa-Zulu Natal has increased from approximately 9.6 million persons to 10.3 million persons over the same period. (Stats SA 2012).

##### (b) Ethnic Profile

The largest ethnic group is Black African (99.7% of the population). Coloured, Indian/ Asian, White and other make up the remaining 0.3% (Stats SA 2012).

##### (c) Gender Profile

Approximately 51% of the South African population is female. The female to male ratio of the NLM is higher at 54.5:45.5 (Stats SA, 2012). According to the Census 2011 (Stats SA, 2012), and in keeping with the general national trends, women constitute the majority (54.5%) of the NLM population.

(d) Language

All of the eleven official languages of South Africa are represented in Kwa-Zulu Natal, however only eight languages are represented in the NLM. The following languages are represented in the NLM. The percentage of the population using the language as a first language is shown in brackets (Stats SA, 2012).

- IsiZulu (89.7%)
- Sesotho (6.5%)
- IsiNdebele (0.9%)
- English (0.8%)
- Setswana (0.4%)
- Afrikaan (0.3%)
- Sepedi (0.2%)
- Other (0.2%)

(e) Education

The level of education in NLM is low; only 8.7% of the population have completed secondary education and only 0.5% have a higher education.

**Table 2: Education Levels in the Nquthu Local Municipality**

Group	Percentage
No schooling.	2.9
Some primary.	49.2
Completed primary.	6.7
Some secondary.	31.5
Completed secondary.	8.7
Higher education.	0.5
Not applicable,	0.5

(source Stats SA 2012).

(f) Employment

Only 11.5% of the population of the NLM are employed. The remaining 88.5% are comprised of unemployed (9.2%), discouraged work seekers (14.9%) and those that are not economically active (64.5%).

(g) Impact of HIV / AIDS

According to 2011 estimates, 5.38 million people in South Africa are living with HIV. An estimated 16% of the adult population aged 15-49 years are HIV-positive. The percentage of deaths caused by AIDS nationally is showing a slight year-on-year decrease. It fell from 49.2% in 2008 to 44.3% in 2010 (Stats SA, 2012).



A significant number of people in the NLM are treated with Anti-Retroviral Therapy each year, which results in a large volume of medical waste being produced.

#### (h) Housing

The total number of households in NLM was 31,612 in 2011. Approximately 63% (19,997) households in the NLM are classified as agricultural households. The average household size in the NLM is 5.1 persons (Stats SA 2012). Stat's SA defines an agricultural household as any household involved in agriculture. The definition of agriculture used by Stats SA cover growing crops, raising livestock, utilisation of forestry and fisheries resources.

## 2.2 Waste Profile

### 2.2.1 Waste Generation Quantities

In order for municipalities to be able to plan for future waste management activities the types and volumes of waste generated in the area needs to be identified. The South Africa State of Environmental Report, 2006 (SOER) calculated waste generation volumes per income level as follows:

- Low income 0.41 kg/ person/ day = 149.65 kg/ person/ year.
- Middle income 0.74 kg/ person/ day = 270.1 kg/ person/ year.
- High income 1.29 kg/ person/ day = 470.85 kg/ person/ year.

The SOER figures for waste generation are also used in the Department of Environmental Affairs Guideline for the Development of Integrated Waste Management Plans (IWMPs).

The DEA IWMP guideline also presents the following income brackets:

- Low income R 0 – R 74,999 per year.
- Middle income R 75,000 – R 999,000 per year.
- High income R 1 million + per year.

The following table summarises the average household income of the NLM. It is assumed that the number of person residing in high, middle and low income households is the same.

**Table 3: Income profile for NLM**

Income group	Income	Percentage	Number of persons
Low	None income	12.4	20,498
	R1 - R4,800	5.5	9,092
	R4,801 - R9,600	12.5	20,663
	R9,601 - R19,600	25.2	41,657
	R19,601 - R38,200	27.8	45,955
	R38,201 - R76,4000	9.8	16,200

Middle	R76,401 - R153,800	4	6,612
	R153,801 - R307,600	1.9	3,141
	R307,601 - R614,400	0.8	1,322
	R614,001 - R1,228,800	0.1	165
High	R1,228,801 - R2,457,600	0.1	165
	R2,457,601+	0.1	165

(source Stats SA 2012).

Based on the above assumptions the population of NLM per income bracket is as follows:

- Low income: 154,066 persons
- Middle income: 11,241 persons
- High income: 330 persons

Based on the number of persons per income bracket it is estimated that 71.9 tonnes of waste per day is produced in NLM. Based on the calculation of 71.9 tonnes of household waste per day it is estimated that 26,248 tonnes of waste are generated annually in the NLM. Considering the rural nature of the municipality, and the limited collection service outside of the towns, only a limited amount of this waste will reach landfill.

### 2.2.2 Estimated Future Generation Quantities

Predictions on future waste generation quantities are dependent on population growth, the extent of collections and any changes in economic landscape of the NLM. The population size of the NLM decreased by -0.25% between the periods 2001 and 2011 likely due to economic migration or those seeking educational opportunities (Stats SA, 2013). However countering this is the possibility that municipal collections may well be expanded over time to include more areas within the NLM. Considering these “opposing factors”, as well as the fact that significant economic changes are unlikely in the short to medium term, it is unlikely that the amount of solid waste generated and collected in the NLM will increase significantly over the short to medium term.

### 2.2.3 Waste Stream Composition

No waste characterisation data exists for the NLM. No field data was collected during this IWMP process and hence existing data for similarly rural municipalities has been consulted to determine the likely composition of the domestic waste stream in the NLM.

GIBB and others have undertaken waste characterisation surveys for a number of largely rural local municipalities in the Eastern Cape, and these results were used to estimate the waste stream composition of the study area.

Waste characterisations from the following municipalities were used:

- Mbizana Local Municipality IWMP, (Ikamva Development Agency and Arcus GIBB, 2005)

- Nyandi Local Municipality IWMP, (Ikamva Development Agency and Arcus GIBB, 2005)
- Port St John' Local Municipality IWMP, (Ikamva Development Agency and Arcus GIBB, 2005)
- Qaukeni Local Municipality IWMP, (Ikamva Development Agency and Arcus GIBB, 2005)

**Table 4: Average waste stream composition as determined from previous waste characterisation surveys (Results as % of waste stream by weight)**

Waste category	Municipality				
	Mbizana	Nyandi	Port St Johns	Qaukeni	Average
Paper/ cardboard	32	38	25	25	30
Metal/ tins	4	9	6	10	7
Plastic	20	24	17	30	23
Kitchen/ wet waste	44	29	39	25	34
Glass	0	0	14	10	6
Wood/ rubber/ textiles	0	0	0	0	0

The waste stream entering the Nondweni Landfill Site was assessed through visual observations during the site inspection. The waste types on site consisted mainly of general waste and builder's rubble.

#### **2.2.4 Projected Trends**

The population of NLM has decreased from 169,419 in 2001 to 165,307 in 2011 (Stats SA 2012). With a decreasing population, waste generation rates are also anticipated to decrease, but as discussed, as collection activities are expanded, the actual amount of waste collected could increase and offset this decrease. Nonetheless, is unlikely that there would be significant changes in the amount of waste generated and collected in the NLM area over the next 5 year planning horizon of this IWMP.

### **2.3 Waste Recycling**

No formal, municipal recycling programme is being undertaken in the NLM at present. Recycling is however being undertaken by private individuals and small private collection companies. For example, cardboard is collected from the Shoprite complex and taken to Mondi in Dundee.

#### **2.3.1 Nquthu Buy-Back Centre**

Department of Environmental Affairs provided NLM with R 7 million in funding as part of the Environmental Protection and Infrastructure Programme. This funding has been allocated for the development of Nquthu buy back centre.



Figure 3: Glass stockpiled on the roadside outside the Nquthu township.

### 2.3.2 Waste Reduction initiatives

No waste reduction initiatives are undertaken by the NLM.

### 2.3.3 Drop-off centres

There are no dedicated recycling drop-off centres in the NLM.

## 2.4 Waste Collection and Transportation

### 2.4.1 Domestic Refuse Removal

Currently the municipality only provides a refuse removal service to Nquthu, Nquthu township and Nondweni. The majority of the municipal area which is largely made up of rural communities remains without municipal refuse services. Approximately 91% of households within the NLM area do not have access to either formal or municipal-provided refuse removal (Stats SA, 2012). This figure is 79% for the Umzinyathi DM as a whole. This figure indicates that the NLM is behind on provision of waste collection services compared to the rest of the UDM. The high level of unserved households in the NLM must be contextualized by the fact that the municipality is largely rural. Urban municipalities have much lower percentages of unserved households (e.g. Ethekeweni Metropolitan Municipality = 12.1%) due to a larger base of rate payers and lower transportation costs (kg waste per kilometre travelled).

Details of the type of refuse removal undertaken in the NLM, the UDM and nationally, are presented in the table below. Kerb-side collection services in rural municipalities are generally prohibitively expensive due to transportation costs mentioned above.

**Table 5: Percentage Type of Refuse Disposal per Household.**

Type of Refuse Disposal	Household Percentage (%)		
	Nquthu LM	Umzinyathi DM	South Africa
Removed by local authority / private company at least once a week	8.5	20.2	62.1
Removed by local authority / private company less often	0.6	1.1	1.5
Communal refuse dump	1.0	1.3	1.9
Own refuse dump	81.8	62.1	28.2
No rubbish disposal	6.6	13.6	5.4
Other	1.4	1.6	0.9

*Source: Statistics South Africa's Census (2011)*

This information illustrates that in 2011, only 9.1% of households within the NLM received a refuse removal service, which is significantly lower than the district and national average. The backlog of household waste removal services within the NLM was thus 90.9%. Approximately 82% of households are using their own refuse dump which, in the long term, is not environmentally sustainable.

The NLM confirmed that the following waste management services are provided:

- Domestic (urban): Collected once a week in Nquthu town, Nquthu township and Nondweni.
- Business/Commercial: Collected as required by the business.
- Street sweeping: Undertaken daily, 6 days per week, in urban centres.

Domestic refuse is stored and collected in 220 litre wheelie bins, supplied by the municipality. Business waste is stored in 3m<sup>3</sup> skip bins.

#### **2.4.2 Waste Management Co-Operatives**

There is one cleaning co-operative operating in the NLM. Nakaza Cleaning Services co-operative provides a cleaning service to the Shoprite shopping centre.

#### **2.4.3 Business and Industry Waste Collection**

The NLM provides a waste collection service for general waste from businesses. Businesses request the frequency of waste collection services which ranges from weekly for small businesses to three times a day for large businesses such as Shoprite. From interviews with the largest businesses in Nquthu, it appears that they are presently satisfied with the municipal refuse collection service that they currently receive.

#### **2.4.4 Waste Management Fleet**

The waste management fleet of the NLM consists of two refuse compactors equipped with a winch system which allows them to empty wheeled skip bins. The NLM also owns two TLBs and two tipper trucks. This plant is used to transport and place skips in the NLM.



Figure 4: Compactor truck



Figure 5: Compactor truck.

Table 6: Summary of refuse compactors

Registration	Model/ Age	Mileage	Condition
NTU 4332	Isuzu 850/ 2014	21,355	Good
NTU 2437	Nissan/ 2012	Undetermined	Good

#### 2.4.5 Refuse Bins

The NLM places wheeled skip bins (3 m<sup>3</sup>) in various locations in Nquthu for litter collection. These bins are placed on the main roads in town. Businesses also place their wheeled skip bins out on roads for collection if they do not have a waste storage area which is accessible to the compactor trucks. These bins are also used by pedestrians for litter.



Figure 6: Refuse bins in Nquthu town.

## 2.5 Waste Treatment and Disposal

### 2.5.1 Treatment

The NLM does not operate any waste treatment facilities.

### 2.5.2 Landfill Sites

There are two landfill sites in the NLM jurisdictional area, namely Nquthu Landfill Site (closed) and Nondweni Landfill Site (operational). The Nquthu Landfill Site was closed and rehabilitated in 2011. Waste from Nquthu and Nquthu township is disposed of at Nondweni Landfill however there have been community complaints against the use of Nondweni Landfill Site and waste has therefore, at times, been diverted to the Endumeni Landfill Site Landfill. It is owned and operated by Endumeni Local Municipality and is located near Glencoe.

#### (a) Nquthu Landfill Site

The Nquthu Landfill Site is located approximately 3 km outside the town of Nquthu. The site was closed in 2011 due to land ownership issues and violation of permit conditions. Waste from Nquthu and Nquthu township is now transported to the Nondweni landfill site.

**Table 7: Summary of the Nquthu Landfill Site.**

<b>Location</b>	Approximately 1.6 km outside of Nquthu.
<b>Co-ordinates</b>	32°46'29.35" SS, 30°41'19.73"E
<b>Site classification</b>	G:S:B-
<b>Permit status</b>	Permitted in 2002 (Permit No. 16/2/7/W214/D2/Y1/P471)
<b>Status</b>	The site is closed and has been rehabilitated. There remain small areas of uncovered waste on site that have not been covered appropriately.
<b>Buffer</b>	No formal buffer in place. There is a residential area within 100 m of the site.
<b>Access</b>	From the R68 along gravel roads.
<b>Surrounding land use</b>	Residential area
<b>Facilities</b>	None.
<b>Plant</b>	N/A closed site.
<b>Description of waste management</b>	Sections of the site have been terraced and covered. There is still a small amount of uncovered waste on site.
<b>Waste on site</b>	General waste.
<b>Stormwater management</b>	None.
<b>Recycling</b>	No recycling on site as there is no recent waste.
<b>Challenges</b>	The site requires further rehabilitation. Areas where waste has been covered are susceptible to erosion.
<b>Suggestions</b>	The site should be terraced and waste capped and covered with topsoil.





Figure 7: Signage outside the site and the entrance to the site.



Figure 8: Uncovered waste on site.

#### (b) Nondweni Landfill Site

The Nondweni Landfill Site was permitted in 1995 and is classified as a G:M:B- site.

The access control at the Nondweni landfill site is good and the site is fenced with gates and a security guard is stationed at the site. The management of the site is however poor and it is not being managed according to permit conditions.

Table 8: Summary of the Nondweni landfill site.

<b>Location</b>	Outside Nondweni.
<b>Co-ordinates</b>	28°12'10.37"S 30°48'26.71"E
<b>Site classification</b>	G:M:B-
<b>Permit status</b>	Permitted in 1995 (B33/2/2122/14/P165).
<b>Status</b>	Operational.
<b>Buffer</b>	The site is located approximately 180 m from the nearest house.
<b>Access</b>	The site is accessed through Nondweni residential area then along gravel roads.
<b>Facilities</b>	Access control: fenced with gates. Guard house and one security guard is stationed on site.
<b>Plant</b>	No mechanical plant on site.
<b>Description of waste management</b>	No formal cells are being developed on the site. Waste is simply being dumped, in an ad hoc manner, onto the ground. This is occurring in a diffuse pattern throughout the site.
<b>Waste on site</b>	General waste and building rubble.
<b>Stormwater management</b>	None.
<b>Recycling</b>	None.
<b>Challenges</b>	Poor waste management practices. There are no cells on site. Waste is dumped onto the land. No compaction or covering of waste as required by

	the permit is undertaken.
<b>Suggestions</b>	<p>Cells should be constructed and waste should be placed into such cells and be covered and compacted.</p> <p>Site staff to be trained on the correct operating procedures for the site.</p> <p>A landfill site attendant should be employed to direct vehicles to a designated offloading area.</p> <p>The security guard on site needs to record the size of that are entering the site. This will allow for an estimate of disposal tonnages.</p>



Figure 9: Entrance to the site (left), internal access roads (right).



Figure 10: Uncovered waste on site.

### 2.5.3 Waste Disposal Tonnage

The Nondweni and Endumeni landfill sites do not have weighbridges therefore accurate records of waste disposal tonnages are not available. Records of vehicles entering the sites are captured by the security guards but records of the volume or type of waste being disposed of are not kept. A weighbridge was however being installed at the Endumeni Landfill Site at the time of this report.

### 2.5.4 Hazardous and Health Care Risk Waste Disposal

Portions of the domestic waste stream can be considered as hazardous or Health Care Risk Waste (HCRW). Hazardous waste is defined by National Environmental Management Waste Act (NEMWA) as *‘Any waste that contains organic or inorganic elements or compounds that may, owing to the inherent physical, chemical or toxicological characteristics of that waste, have a detrimental impact on health and the environment’*. Hazardous waste commonly found in the domestic waste stream includes fluorescent light bulbs, batteries, chemicals and paints.

Health care risk waste is waste that contains infectious agents, sharps, hazardous chemicals or pharmaceuticals, is genotoxic or radioactive. Used nappies, needles and medication are all classified as HCRW and are generally found as part of the domestic waste stream.

Hazardous and health care risk should be treated and then disposed of at a hazardous landfill site or a general site if delisted. There are no hazardous landfill sites within the NLM although there are number of hazardous waste landfill sites and treatment facilities in Kwa-Zulu Natal (KZN).

The main producers of HCRW in the NLM are:

- Provincial hospitals: The Charles Johnson Memorial Hospital is the only hospital in the NLM.
- Provincial clinics: There are 15 clinics in the NLM, (12 fixed clinics and 3 mobile clinics. A further two clinics are under construction).
- Private surgeries and clinics. The number of such facilities has not been determined.

The table below indicates the estimated annual volumes of HCRW produced in the NLM.

Health care risk waste generated at government clinics in NLM is transported to the Charles Johnson memorial hospital for temporary storage. From here it is collected by HCRW contractors (at the time of this report this was Compass Waste) for treatment and disposal. The quantities listed in the table below include waste generated at clinics.

**Table 9: Volumes of HCRW generated in the NLM. Figures sourced from Charles Johnson Memorial Hospital. Includes volumes of waste brought to the hospital from surrounding clinics.**

	Volume of HCRW generated per month (kg)			
HCRW category	Jan 2014	Feb 2014	March 2014	Monthly average
Anatomical	323.5	160.5	100.6	194.8
Infectious	3471.4	5,595.3	5,068.6	4,711.7
Sharps	502.0	401.6	415.6	439.7
Pharmaceutical	22.8	60.9	32.8	38.8
<b>Total</b>	<b>4319.7</b>	<b>6218.2</b>	<b>5617.5</b>	<b>5,385.1</b>

During the period January 2014 – March 2014 a monthly average of 5,358.1 kg of HCRW was collected by the Charles Johnson Hospital. The largest category of HCRW was infectious waste, accounting for approximately 87% of HCRW generated.

**Table 10: Annual estimates of HCRW generated in the NLM. Figures sourced from Charles Johnson Memorial Hospital. Includes volumes of waste brought to the hospital from surrounding clinics).**

HCRW Category	Annual volume (kg)
Anatomical	779.3
Infectious	18,846.9
Sharps	1,758.9
Pharmaceutical	155.3
<b>Total</b>	<b>21,540.5</b>

Based on the records for the first quarter of 2014 it is estimated that a total of 21,450 kg of waste will be generated in the NLM annually. It should be noted that this figure only includes HCRW which is collected from the Charles Johnson Memorial Hospital. The figure does not include any HCRW which is generated by households or by clinics which do not send HCRW to the Charles Johnson Memorial Hospital.

The NLM provides a collection service for general waste generated at hospitals and clinics. The waste management officer at the Charles Johnson Memorial Hospital indicated that hospitals and clinics are not separating waste as required which results in HCRW getting mixed with the general waste.

Compass Waste collects HCRW from the Charles Johnson memorial hospital. According to the KZN Hazardous Waste Management Plan there are a total of 39 operational hazardous waste treatment and disposal facilities within KZN (SRK, 2013). The type and number of hazardous waste of facilities are listed in the following table.

**Table 11: Hazardous waste treatment and disposal facilities in KZN**

Type of Facility	Number in KZN	Number currently operational	Number currently closed
HCRW treatment facilities	4	3	1
Landfill (including 1 asbestos and 1 mercury landfill site)	21	10	11
Incinerator	1	1	0
Slap disposal	1	1	0
Storage	15	15	0
Recycling	2	2	0
Total	51	39	12

Sourced from SRK, 2013

There are two veterinary incinerators in KZN located in Durban and Pietermaritzburg. It is anticipated the veterinary clinics in NLM use one of these facilities.

## 2.6 Illegal Dumping and Littering

### 2.6.1 Illegal dumping

Illegal dumping, which consists mainly of domestic waste and builder's rubble, is a problem in the NLM. Other than the Nondweni landfill site, there is no other municipal facility for the disposal of builder's rubble and domestic waste within the NLM jurisdictional area. This, and the lack of transfer stations, is a contributor to illegal dumping, which is also the result of poor awareness of good waste management practice.

The NLM presently only provides a refuse collection service to 9.1% of its households. The lack of refuse collection may influence illegal dumping as few residents have transport to take their refuse directly to the landfill site.



Figure 11: Illegal dumping along roads outside Nquthu.

### **2.6.2 Littering**

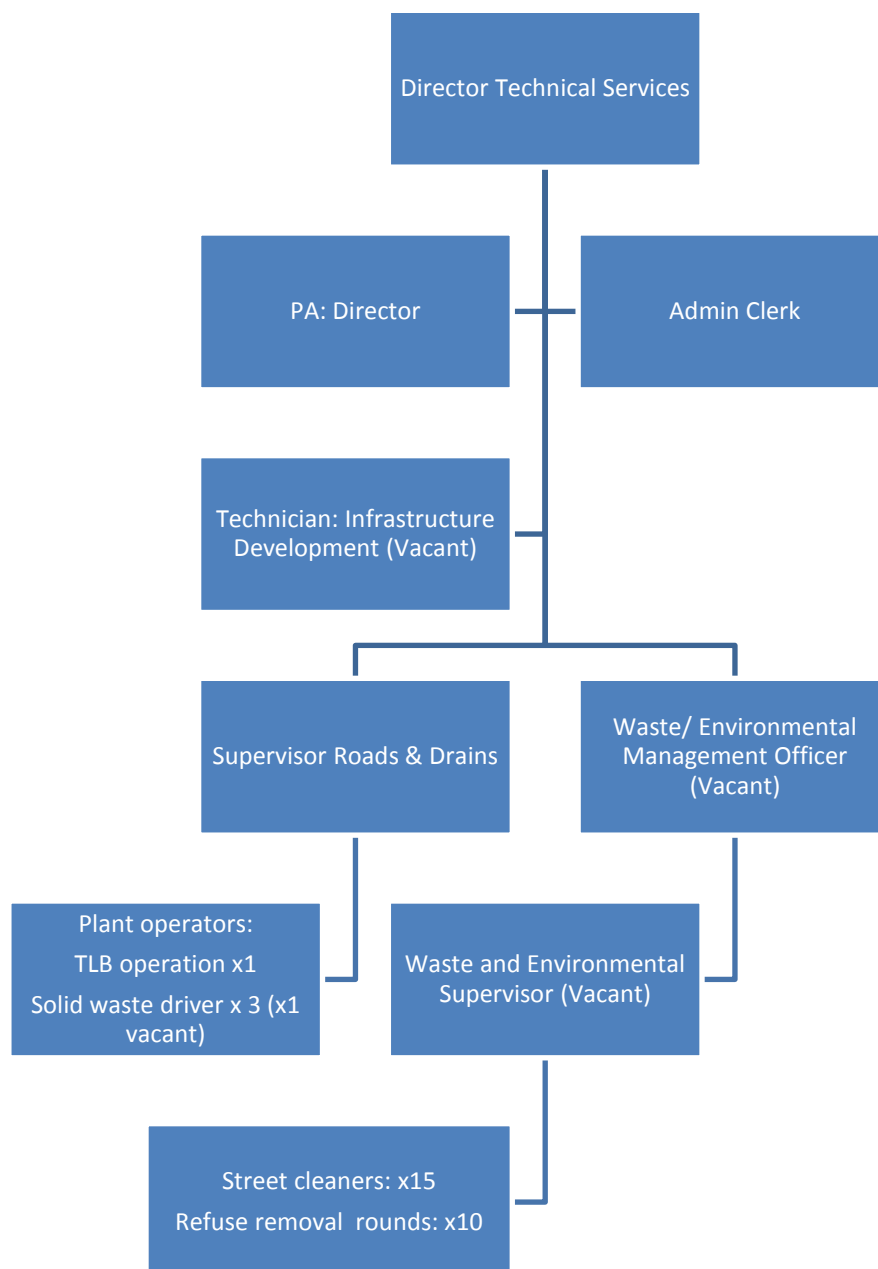
Littering does occur in the town of Nquthu, but it appears to be well controlled through a daily litter picking round. There however appears to be insufficient refuse bins in Nquthu. Wheeled skip bins are available for litter however these bins are few in number. Awareness campaigns and enforcement are required to reduce littering. The NLM employs eight people to clean the streets. Three of the eight litter pickers are employed permanently by the NLM, and the remaining five are employed through programmes such as the Expanded Public Works Programme (EPWP).

## **2.7 Waste Management Institutional Functioning**

### **2.7.1 Waste Management Staff**

The waste management portfolio is managed by the Waste, Roads and Drains section of the Technical Services Directorate of the NLM. The structure of the Technical Services department of the NLM is shown in the following organogram.





**Figure 12: Official organogram for the Water and Environmental section of the Nquthu Local Municipality. Vacant posts are indicated.**

Out of the 36 posts in waste management four posts are vacant. Unfortunately three of these posts are senior posts, the technician for infrastructure development, the waste/ environmental management officer and the waste and environmental supervisor.

**Table 12: Key individuals in waste management positions in the NLM at the time of this IWMP.**

Position	Name
Director of Technical Services	Mr Msizi Gcabashe
Supervisor of Waste, Roads and Drains	Mr Thomas M Ramaloko

## 2.7.2 Economic and Finances

The NLM is required to budget and provide finances for waste management resources. Traditionally and in general, the provision of waste collection and disposal services provided by municipalities has been under-funded. This situation has been aggravated in recent years due to changes in legislation which place increasingly demanding requirements on municipalities (provision of recycling facilities, weekly refuse collection services etc.), as well as higher costs of provision of plant and equipment and development of disposal facilities. These increases often outstrip the rate at which tariffs or rates can be increased. A further factor is that much of the funding available has been diverted to other social areas (e.g. housing). It is thus extremely difficult for smaller municipalities to fund the provision of waste services and equally challenging to introduce or increase tariffs to the necessary levels.

The official municipal budget for 2014/2015 was reviewed. It reflects a one line item for “waste management” with the following amounts indicated:

- 2014/15: R1,384,000
- 2015/16: R1,462,000
- 2016/17: R1,541,000

A detailed breakdown of the waste management budget was not available at the time of this IWMP.

## 2.8 Waste Information Management

The NLM has yet to define a system for management of its waste information. The most obvious challenge is that there are currently no weighbridges installed at either of the landfill sites used by NLM and hence incoming waste cannot be quantified accurately. The landfill caretakers at Nondweni and Endumeni landfill sites do however record the number of vehicles utilising the sites. This information is however not being interpreted to determine likely quantities of waste entering the sites and is not being captured electronically.

### 2.8.1 Waste Disposal Tonnages

Landfill site registers are kept for vehicles entering both the Nondweni and Endumeni landfill site. The following records were extracted from the registers for NLM refuse compactors visiting the landfill sites.

**Table 13: Summary of disposal of waste from NLM at the Nondweni landfill site.**

Date	Number of loads
05/02/2014	2
12/02/2014	1
19/02/2014	1
26/02/2014	2
19/03/2014	1
26/03/2014	2
02/04/2014	1
09/04/2014	1
10/04/2014	2



23/04/2014	2
30/04/2014	2
08/05/2014	1
14/05/2014	3
21/05/2014	2
28/05/2014	3
04/06/2014	2
06/06/2014	1
<b>TOTAL</b>	<b>29</b>

According to the Nondweni landfill site records between 05 February and 06 June 2014 the refuse compactors visited the landfill site forty times to dispose of waste. . This equates to an average of 10 loads per month.

**Table 14: Summary of disposal of waste from NLM at the Endumeni landfill site**

Date	Number of loads
03/02/2014	1
30/04/2014	1
03/05/2014	1
05/05/2014	1
05/05/2014	2
06/05/2014	1
06/05/2014	2
08/05/2014	1
09/05/2014	1
09/05/2014	1
10/05/2014	1
11/05/2014	1
12/05/2014	2
13/05/2014	3
14/05/2014	1
15/05/2014	1
16/05/2014	2
18/05/2014	1
19/05/2014	2
20/05/2014	1
21/05/2014	1
22/05/2014	2
24/05/2014	1
26/05/2014	2
29/05/2014	1
30/05/2014	1
01/06/2014	1
02/06/2014	1
02/06/2014	2

03/06/2014	1
05/06/2014	2
06/06/2014	2
<b>TOTAL</b>	<b>44</b>

According to the Endumeni landfill site records between 03 February 2014 and 06 June 2014 the NLM refuse compactors visited the landfill site 44 times to dispose of waste. This equates to an average of 11 loads per month.

The refuse compactors are visiting the Endumeni landfill site more frequently as at present only waste from Nondweni is disposed of at the Nondweni landfill site and all waste collected from Nquthu and Nquthu township is disposed of at the Endumeni landfill site.

### **2.8.2 Waste Information Management**

The Waste Information System (WIS) provides a facility for local authorities and private organisations alike to record and report waste generated. The national WIS system is not particularly well utilized by smaller local municipalities at present. There are no records available on the WIS for waste generated in NLM and UDM and the NLM have confirmed that they are not reporting on the WIS.

## **2.9 Community Waste Awareness Campaigns**

Community awareness of waste management is a key concern that needs to be addressed. Dumping of waste and littering is typically a result of a lack of disposal facilities, lack of awareness of municipal bylaws, and a lack of enforcement. The NLM does not currently run any waste awareness campaigns. It is anticipated that awareness campaigns will be undertaken as part of the Department of Environmental Affairs (DEA) funded Youth Jobs in Waste programme.

Awareness campaigns should be undertaken on a regular basis to encourage citizens to make use of available bins and waste removal services and to stop littering and illegal dumping. They should include waste minimisation and recycling. Waste removal services and tariffs need to be widely advertised.

## **2.10 Planned Waste Projects**

The NLM is currently undertaking or is planning to undertake various waste projects and initiatives. The table below lists these. These are to be considered when developing the implementation plan for this IWMP.

**Table 15: Waste and environmental management projects that are being undertaken or planned in the NLM at the time of this IWMP.**

<b>Project Name</b>	<b>Budget</b>	<b>Partner</b>	<b>Project Detail</b>
Food for Waste	Funded by COGTA. Budget unknown.	COGTA	The project is based in Nquthu town and Nquthu township and has 93 beneficiaries. The beneficiaries undertake a number of tasks including building works, cleaning of public toilets, cleaning municipal offices and street cleaning.
Expanded Public Works Programme (EPWP)	Funded by Dept Public Works. Budget unknown	Department of Public Works	A total of 102 beneficiaries are employed. The tasks undertaken include cleaning of stormwater infrastructure and road rehabilitation.
Community Works Programme (CWP)	Funding mechanism unknown	COGTA	The project employs 990 beneficiaries. The task undertaken as part of the project include construction of crèches, cleaning of schools, home care and grass cutting.
Environmental Protected Infrastructure Programme.	Donga rehabilitation: R 15 million Nquthu buy-back centre: R 7 million	Department of Environmental Affairs	The project has two sections, the first is rehabilitation of dongas and the second is the development of a buy-back centre in Nquthu. 193 beneficiaries have been recruited to rehabilitate dongas and approximately 99 beneficiaries have been to develop the buyback centre.
Kwa-Zulu Natal Youth Jobs in Waste	There is a budget of R67 million for the entire Kwa-Zulu Natal area.	DEA as part of the Environmental Protection and Infrastructure Programme (EPIP).	The project is aimed at enhancing the capacity of the municipality in rendering the waste management services to the community, with main focus on landfill sites and awareness campaigns. The department has employed 17 beneficiaries in the NLM area to work on the project for a period of 12 months. The project has since been extended to August 2015.

## 2.11 Way Forward

The next section in this IWMP presents the gaps and needs identified through this situational analysis review, and presents strategies and goals to address these needs.

### 3 Needs Analysis

This section presents the waste management needs in the NLM area as identified through the IWMP process. It is limited to municipal services. The identified needs are presented in tables under the topics of:

- Institutional issues.
- Waste management services.
- Public awareness.

A further explanation of the key needs is presented at the end of the section. A comprehensive list of identified needs has been tabled to ensure that the IWMP is comprehensive, and that meaningful objectives can be defined for the next planning horizon.

#### 3.1 Key Issues Identified in Umzinyathi DM 2006 IWMP

A summary of the key issues identified during the 2006 UDM IWMP process are listed in the following table. A response is also provided indicating to what extent the NLM have been successful in addressing these needs over the last two years.

**Table 16: Key issues identified in 2006 Umzinyathi DM IWMP**

Key Issue	Details	Extent to which key issues have been addressed since 2006.
Lack of waste minimisation strategies	No waste minimisation strategies have been developed within the LMs.	The NLM does not currently have any waste minimisation strategies.
Limited waste removal service.	The rural areas of the different LMs do not receive a waste removal service.	Waste removal services are restricted to Nquthu town, Nquthu township and Nondweni.
Lack of planning for new developments.	The new developments that taking place in the different LMs must be included for the provision of waste disposal service.	Undetermined. No information was available from the NLM on whether action has been taken to address this issue.
Illegal disposal of waste sites.	There is illegal disposal of waste at various sites in the UDM. The illegal disposal should be addressed in order to manage and minimise the illegal activities pertaining to waste disposal.	The Nquthu landfill site is closed and no illegal dumping of waste is occurring at the site. The Nondweni landfill site is secured to prevent illegal dumping. Illegal dumping is occurring on roadsides in the NLM.

Waste management by-laws.	New municipal by-laws should be drafted that pertain directly to waste and issues surrounding waste management. Issues such as illegal dumping of waste, waste minimisation and recycling etc. should be dealt with in the by-laws.	The NLM stormwater and waste management bylaws do not cover any waste management issues.
Personnel shortage	All LMs in the UDM have a shortage of personnel. There are a number of temporary employees working for LMs.	There are approximately four vacancies in the waste management department. Two of the vacancies are management positions the Technician for infrastructure development and the waste/ environmental management officer.
Waste management fleet	The LMs have a number of vehicles that are old and in poor condition that are due for replacement.	The NLMs two compactors have been purchased fairly recently (2012 and 2014) and are in good condition.
Waste information management	Municipal waste records should be kept and maintained for informed future decision making purposes and to comply with the Government's Waste Information System requirements.	The NLM does not keep records of waste generation in the NLM area. No records of waste type or volume are kept at the Nondweni landfill site.
Succession planning	A mitigation strategy or some form of succession planning should be developed for the expected increase in HIV-AIDS related deaths among personnel.	Undetermined. No information was available from the NLM on whether action has been taken to address this issue.
Closure and rehabilitation of the Nondweni landfill site.	The Nondweni landfill site should be properly closed and rehabilitated in accordance with the Minimum Requirements for Closure. After closure a transfer station should be established at the site close for use by local residents.	The Nondweni landfill site is still operational. The Nondweni landfill site is permitted, and is the only operational landfill site in the NLM. Closure of this facility will incur significant transport costs for the NLM.

### 3.2 Issues Identified in this IWMP

This section is essentially a list of all waste management related issues and shortfalls which have been identified during the IWMP process. It includes issues identified through:

- Staff interviews.
- Business interviews.
- Facility inspections.
- Legislation review.

The tables below present the identified needs in the following order:

- Table 16: All needs that were identified, grouped by topic
- Table 17: Needs in terms of complying with legislative or policy requirements.
- Table 18: Summary of key needs

The table below holds all issues that were raised or identified through this IWMP process.

**Table 17: Waste management issues identified through interviews and facility inspections. All issues raised have been captured in the table below.**

Topic	Finding
<b><i>Institutional Issues</i></b>	
Waste planning	<ul style="list-style-type: none"> <li>• No transfer station is planned for Nquthu.</li> <li>• The Nquthu landfill site has been closed but not fully rehabilitated.</li> </ul>
Staff management	<ul style="list-style-type: none"> <li>• There are approximately four vacancies in the waste management department. Two of the vacancies are management positions the Technician for infrastructure development and the waste/ environmental management officer..</li> <li>• There is a lack of Peace Officers to prevent illegal dumping and littering.</li> <li>• Not all workers have PPE.</li> <li>• PPE is ordered through a tender process so sometimes there are shortages when the NLM is waiting for a service provider to be appointed.</li> <li>• Staff do not undergo regular waste management training.</li> <li>• Staff lack training and capacity.</li> <li>• Many employees are near retirement and hence the NLM has questioned the need to train such individuals.</li> </ul>
Financial management	<ul style="list-style-type: none"> <li>• A shortage of finances is currently preventing many improvements such as increased staff compliment.</li> <li>• Rates in Nondweni are not being paid.</li> </ul>
Information management	<ul style="list-style-type: none"> <li>• Records of waste type and quantity are not kept at the Nondweni landfill site. The landfill site should have a weighbridge. A site caretaker is keeping records of vehicles entering the site. The caretaker also needs to be estimate the waste volume by recording the vehicle size, how full the vehicle is and the type of waste being offloaded. These records should be kept electronically on a central database.</li> <li>• NLM does not pay to dispose of waste at Endumeni landfill site so no receipts are issued.</li> </ul>
Capacity building and	<ul style="list-style-type: none"> <li>• The positions of Technician for Infrastructure Development and the Waste/ Environment Officer positions are vacant.</li> </ul>

Topic	Finding
staff training	<ul style="list-style-type: none"> <li>Technical capacity, specifically in waste engineering, in the waste management section is lacking.</li> <li>Staff lack the training and experience to correctly manage the Nondweni landfill.</li> <li>Employees at lower levels lack a basic understanding of waste management. This needs to be developed before training can be successfully completed.</li> <li>Training programmes must take into consideration the literacy levels of employees.</li> <li>Employees need to be encouraged to actively participate in training programmes.</li> <li>No one from NLM attends the Provincial waste management officer forum.</li> </ul>
<b>Service Issues</b>	
Recycling	<ul style="list-style-type: none"> <li>The community needs to be informed and shown the value of recycling through information sessions, awareness campaigns and school programs.</li> <li>There are no municipal facilities for recycling. Drop-off centres for recyclables need to be established at schools, community facilities and public locations.</li> <li>An incentive is required to encourage communities to participate in recycling such as a reduction in rates, equipment for schools or vouchers etc.</li> <li>There is a lack of systems facilitating recycling in businesses, especially small business.</li> <li>In-house training with NLM staff is needed to highlight the importance of recycling.</li> </ul>
Waste collection	<ul style="list-style-type: none"> <li>Refuse collection services are restricted to Nquth, Nquthu township and Nondweni.</li> <li>90% of households do not have a refuse collection service.</li> <li>Not all businesses have a waste storage area that is accessible to compactors. Skips are left on the road side. Hawkers block access to skips preventing skips from being emptied by municipal vehicles.</li> </ul>
Hazardous waste	<ul style="list-style-type: none"> <li>There is a significant lack of facilities where the public can dispose of household hazardous waste (e.g. old batteries, CFLs etc). The NLM could provide such facilities at transfer stations, and advertise where such waste can be safely disposed of, including private businesses such as service stations which may receive used oil.</li> <li>Oil from garages is sometimes mixed with domestic waste.</li> </ul>
Health Care Risk Waste	<ul style="list-style-type: none"> <li>HCRW has been observed mixed with general waste from hospitals and clinics.</li> <li>Mixing of HCRW occurs at clinics and hospitals.</li> </ul>
Treatment	<ul style="list-style-type: none"> <li>There is no local treatment facility (incinerator or autoclave) for HCRW waste in the NLM area.</li> </ul>
Transportation	<ul style="list-style-type: none"> <li>Political issues prevent waste from Nquthu being disposed of at the Nondweni landfill site.</li> </ul>
Nquthu Landfill Site	<ul style="list-style-type: none"> <li>The site is not secured.</li> <li>The site has been closed but has not been fully rehabilitated.</li> </ul>

Topic	Finding
	<ul style="list-style-type: none"> <li>The site does appear to have some air space capacity and could continue to operate if social issues are investigated.</li> </ul>
Nondweni Landfill Site	<ul style="list-style-type: none"> <li>Records of waste types and volumes entering the landfill site are unavailable.</li> <li>There is a lack of control over the waste being taken to the landfill site.</li> <li>Additional staff are required for recycling, security and maintenance at landfill sites.</li> <li>A separate area is required at the landfill site for inert material and builder's rubble. This material can be used as cover material.</li> <li>Waste is not compacted or covered.</li> <li>There are no cells on site.</li> </ul>
Enforcement of by-laws, litter and illegal dumping	<ul style="list-style-type: none"> <li>Waste management bylaws need to be developed. The current stormwater and waste management bylaws do not address waste management.</li> <li>Waste management by-laws should include a schedule of fines.</li> <li>The public need to be informed of whom to contact regarding illegal dumping and the NLM needs to be seen to be actively responding to reports of illegal dumping.</li> <li>Awareness campaigns on the consequences of illegal dumping and the waste by laws are needed.</li> <li>Transfer stations which accept domestic household waste are needed in areas where illegal dumping is a problem.</li> <li>Litter and illegally dumped material needs to be removed promptly as it can affect other services such as drains, stormwater systems and sewer lines.</li> <li>There is a lack of street bins for use by pedestrians.</li> <li>People throw litter into the back of the compactor when it is stopped during collection rounds. The litter then blows out.</li> </ul>
<b>Public Awareness Issues</b>	
Public awareness	<ul style="list-style-type: none"> <li>Public awareness needs to be improved.</li> <li>No awareness campaigns have been budgeted for in 2014 – 2015.</li> </ul>

The table below holds key requirements imposed on the NLM by current policy, legislation and guidelines. All key requirements are listed, irrespective of whether the NLM complies or not. Activities which are recommended by policy/ legislation, but not necessarily required, have not been included. Draft regulations have been considered as an indication of likely imminent requirements.

**Table 18: Key legal/policy requirements.**

Topic	Requirement
<b>Institutional Issues</b>	
Waste planning	<p><b>National Environmental Management: Waste Act (59 of 2008):</b></p> <ul style="list-style-type: none"> <li>NLM must submit an IWMP to the MEC for approval.</li> <li>NLM must integrate the IWMP into the IDP. Must follow the consultative process in Section 29 of the MSA (separately or as part of the IDP).</li> <li>Each municipality must formally designate a waste management officer.</li> <li>NLM must submit annual reports of the implementation of the IWMP in terms of Section 46 of the MSA.</li> </ul> <p><b>National Policy for the Provision of Basic Refuse Removal (BRR) Services to</b></p>



	<b>Indigent Households (GN413 of 2011)</b> <ul style="list-style-type: none"> <li>NLM to integrate the national BRR policy into the NLM's Indigent Policy, if present.</li> <li>NLM to consider formally identifying deserving households/areas for BRR services</li> <li>NLM to implement and maintain indigent register system in line with policy, and implement management programmes to minimise fraudulent activities.</li> <li>Regularly update the indigent register.</li> </ul>
Financial management	<b>National Environmental Management: Waste Act (59 of 2008):</b> <ul style="list-style-type: none"> <li>All municipalities must keep separate financial statements including a balance sheet of services provided.</li> </ul>
Waste Information management	<b>National Waste Information Regulations (GNR 625, 13 August 2012)</b> All those conducting activities listed in Annex 1 must register on SAWIC <ul style="list-style-type: none"> <li>Activities at different facilities must be registered individually. Includes landfills. Excludes transfer stations.</li> <li>Quarterly information to be submitted to the SAWIC.</li> <li>All information submitted must be kept for minimum of 5 years.</li> </ul>
<b>Service Issues</b>	
Waste reduction	<b>National Environmental Management: Waste Act (59 of 2008):</b> <ul style="list-style-type: none"> <li>Municipality must put in place measures that seek to reduce the amount of waste generated, and where generated, measures to ensure that it is re-used, recycled and recovered, treated and disposed of.</li> </ul>
Waste recycling and drop-off centres	<b>National Domestic Waste Collection Standards (GN21 of 2011)</b> <ul style="list-style-type: none"> <li>The service provider/municipality must provide guidelines to households on how to separate waste.</li> <li>The municipality must encourage community involvement in recycling.</li> <li>The municipality must provide an enabling environment for household recycling to include either a) undertaking kerbside collection of recyclables, or b) ensuring Communal Collection Points for recyclables (including "non-mainstream recyclables" such as batteries, fluorescent tubes etc.) for collection by private service providers.</li> <li>Collection of full containers from drop-off centres must be done within 24 hours of being reported full.</li> </ul>
Waste collection	<b>National Domestic Waste Collection Standards (GN21 of 2011)</b> <ul style="list-style-type: none"> <li>Non-recyclable waste (i.e. domestic): A weekly service is required as a minimum. Only 9.1% of households receive a collection service. A weekly collection service is only possible when all vehicles are operational.</li> <li>Weekly collections must be consistent – the same day of the week, the time which waste is put out for collection must be stipulated.</li> <li>If a collection is missed or the service is interrupted the service must resume as soon as possible and the waste must be removed no later than on the next scheduled collection day.</li> <li>Changes to collection service e.g. public holidays must be publicized in advance.</li> <li>Recyclable waste: to be collected once every two weeks.</li> </ul>

	<ul style="list-style-type: none"> <li>• Bulk containers and Communal Collection Points: to be collected when full, or within 24hrs of reported as full, but not less than once per week.</li> <li>• All refuse collection workers must receive regular medical check-ups, appropriate PPE and on-going health and safety training.</li> <li>• Roadworthiness of all collection vehicles to be ensured.</li> <li>• Waste must be transported in closed vehicles.</li> <li>• Skips should be managed in line with the Collection Standards</li> </ul> <p><b>National Policy for the Provision of Basic Refuse Removal Services to Indigent Households (GN413 of 2011)</b></p> <ul style="list-style-type: none"> <li>• NLM must identify indigent households and maintain a register of indigent households (GN 34385)</li> <li>• Households to be provided with free receptacles for refuse storage.</li> <li>• Appropriate collection frequencies are a) weekly for biodegradable waste, b) monthly for recyclables (rural areas), c) fortnightly for recyclables (urban areas)</li> <li>• Skips must be considered a last resort, and should be cleared often enough to prevent dumping.</li> </ul>
Storage of waste	<p><b>National Norms &amp; Standards for the Storage of Waste (GN926 of 2013)</b></p> <ul style="list-style-type: none"> <li>• These requirements must be taken into account when designing and managing storage facilities with capacity &gt;100m<sup>3</sup> e.g. transfer stations. Things to consider include access control, signage, leak prevention etc.</li> </ul> <p><b>Waste Tyre Regulations (2008)</b></p> <ul style="list-style-type: none"> <li>• If owning or managing stockpiles, NLM may have responsibilities under Section 8 of these regulations for waste tyre stockpiles (&gt;500 m<sup>2</sup>).</li> <li>• Waste Tyre Storage Plans by any industry are to be approved by the NLM Fire Department.</li> </ul>
Landfill sites	<p><b>National Standards for the Disposal of Waste to Landfill (GN636 of 2013)</b></p> <ul style="list-style-type: none"> <li>• These standards place restrictions on disposal of certain waste to landfill. New landfill site liner requirements will apply to any new cells constructed at any landfill site.</li> </ul>
<b>Public Awareness Issues</b>	
Public awareness and communication	<p><b>National Domestic Waste Collection Standards (GN21 of 2011)</b></p> <ul style="list-style-type: none"> <li>• All complaints regarding waste must be dealt with promptly, and responded to within 24hours.</li> <li>• An effective register of complaints must be kept.</li> <li>• NLM must create awareness around key waste issues as defined in the standards including illegal dumping, recycling and composting</li> <li>• NLM must provide clear guidelines on different domestic waste types, source separation, appropriate containers for domestic waste and disposal methods for waste not collected by kerbside refuse collection service</li> </ul>
Capacity building and training	<p><b>National Policy for the Provision of Basic Refuse Removal Services to Indigent Households (GN413 of 2011)</b></p> <ul style="list-style-type: none"> <li>• NLM must implement education and awareness training regarding the BRR services in relevant areas.</li> </ul>

### 3.3 Key Issues Identified in this IWMP

The preceding section lists numerous areas where the present waste management system could be improved. Key issues have been selected from these lists and summarised in the table below.

**Table 19: Key issues distilled from this section**

Topic	Finding
<b><i>Institutional Issues</i></b>	
Internal Capacity	<p><b><i>NLM Waste Management has a general shortage of staff and staff capacity.</i></b></p> <p>Manpower: A number of posts are vacant. Most significantly, the “waste management officer” position is vacant. A number of employees at lower level are close to retirement. A staff replacement plan needs to be developed. New staff should receive waste management training.</p>
Waste Planning	<p><b><i>There is a lack of long term infrastructure and operation planning.</i></b></p> <p>No documented plan exists which presents the long term infrastructure vision for waste management in the NLM. A Waste Masterplan is needed to cover infrastructure and operations.</p>
Waste Information and Data Management	<p><b><i>There is a lack of waste information available.</i></b></p> <p>There is currently no waste information system in place in the NLM and there are no comprehensive records of waste disposed of at the Nondweni or Endumeni landfill sites. Records of waste type and volume are not being collected at the Nondweni landfill site. The security guard at Nondweni needs to record the size of vehicles entering the site, the type of waste entering, and to estimate quantities. This will allow the NLM to estimate waste disposal tonnages. This information should be captured electronically and can be uploaded to the WIS.</p>
<b><i>Service Delivery Issues</i></b>	
Recycling	<p><b><i>There are no recycling facilities available to the public.</i></b></p> <p>The latest collection standards mandate the NLM to facilitate recycling at source and there is much which the NLM can implement to fulfil its mandate of “providing an enabling environment for household recycling”. Presently there are no facilities for dropping off recyclables in the NLM. A drop-off centre should be established in Nquthu.</p>
Collection services	<p><b><i>Collection services do not conform to the National Domestic Waste Collection Standards (GN 21, Jan 2011)</i></b></p> <p>A weekly collection service is presented in the National Domestic Waste Collection Standards (GN 21, Jan 2011) as being the minimum requirement. Currently approximately only 8.5% of households receive a weekly refuse collection service.</p>

Landfills	<p><b><i>The Nondweni landfill site is not meeting permit requirements</i></b></p> <p>The Nondweni landfill site is not being managed correctly. The landfill site permit requires waste to be compacted and covered on a daily basis with 150 mm of cover material.</p>
By-laws and Enforcement	<p><b><i>Effective enforcement of the waste management by-laws is not being achieved</i></b></p> <p>There are currently no by-laws which address waste management. By-laws should be developed. There is a lack of capacity to enforce the by-laws (once developed). More peace officers are required and peace officers should be designated within the waste management section. An agreement is required between waste management and the traffic department whereby fines for illegal dumping are issued by the traffic department. Public awareness on the issue of illegal dumping needs to be improved and the public need to be informed of who to contact should they witness illegal dumping and what details should be recorded.</p>
<b><i>Public Awareness and Communication Issues</i></b>	
Waste Management Awareness	<p><b><i>Lack of waste management awareness</i></b></p> <p>Littering and illegal dumping result in part due to a lack of waste management awareness. The NLM is not currently running any waste management awareness campaigns.</p>

## 4 Waste Management Objectives

This section defines the key waste management objectives for the NLM which represent the broad key focus areas for waste management in the municipality. These are then unpacked in the form of specific actions or “projects” in the following section.

### 4.1 National Waste Management Strategy Objectives

The National Waste Management Strategy (NWMS) is structured around a framework of eight goals. The goals along with their respective targets must be met by 2016.

**Table 20: National Waste Management Strategy Objectives**

Goal	Targets for 2016
1. Promote waste minimisation, re-use, recycling and recovery of waste.	<ul style="list-style-type: none"> <li>25% of recyclables diverted from landfill sites for re-use, recycling or recovery.</li> <li>All metropolitan municipalities, secondary municipalities and large towns have initiated separation at source programmes.</li> <li>Achievement of waste reduction and recycling targets as set in industry waste management plans for paper and packaging, pesticides, lighting (CFLs) and tyre industries</li> </ul>
2. Ensure the effective and efficient delivery of waste services.	<ul style="list-style-type: none"> <li>95% of urban households and 75% of rural households have access to adequate levels of waste collection services.</li> <li>80% of waste disposal sites have permits.</li> </ul>
3. Grow the contribution of the waste sector to the green economy	<ul style="list-style-type: none"> <li>69,000 new jobs created in the waste sector.</li> <li>2,600 additional SMEs and cooperatives participating in waste service delivery and recycling</li> </ul>
4. Ensure people are aware of the impact of waste on their health, well-being and the environment.	<ul style="list-style-type: none"> <li>80% of municipalities running local awareness campaigns</li> <li>80% of schools implementing waste awareness campaigns</li> </ul>
5. Achieve integrated waste management planning.	<ul style="list-style-type: none"> <li>All municipalities have integrated their IWMPs with their IDPs, and have met the targets set in IWMPs</li> <li>All waste management facilities required to report to SAWIC have waste quantification systems that report information to WIC</li> </ul>
6. Ensure sound budgeting and financial management for waste services	<ul style="list-style-type: none"> <li>All municipalities that provide waste services have conducted full-cost accounting for waste services and have implemented cost reflective tariffs</li> </ul>
7. Provide measures to remediate contaminated land.	<ul style="list-style-type: none"> <li>Assessment complete for 80% of sites reported to the contaminated land register</li> <li>Remediation plans approved for 50% of confirmed contaminated sites.</li> </ul>
8. Establish effective compliance with and enforcement of the Waste Act	<ul style="list-style-type: none"> <li>50% increase in the number of successful enforcement actions against non-compliant activities.</li> </ul>

	<ul style="list-style-type: none"> <li>800 environmental management inspectors (EMIs) appointed in the three spheres of government to enforce the Waste Act</li> </ul>
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Nquthu LM, like most smaller, largely rural municipalities, will not be able to achieve these targets by 2016. The objectives presented below will however move the NLM towards achieving these targets.

## 4.2 Waste Management Objectives

A total of eight objectives, presented below, have been defined through the IWMP process informed by:

- the Situation Analysis.
- the Needs Analysis.
- input from IWMP PSC workshop

These objectives represent key areas which, if addressed, will contribute significantly to NLM fulfilling its broader waste management mandate over the next five years. They typically address the most pressing waste management issues in the NLM. The current financial limitations of the NLM have however been considered, and the objectives developed with this in mind. Nonetheless, the recent waste policy and legislation changes do necessitate the inclusion of certain objectives so as to ensure legal compliance. The objectives will not necessarily address all waste management challenges facing the NLM and not all projects or interventions planned under Section 5 will necessarily have a “home” under the objectives below. The objectives do however present the most significant, strategic “wins” for waste management. Finally, the objectives have, as far as possible, been structured so as to make them measurable. The objectives are all considered important and implementation thereof should run concurrently.

### 4.2.1 Objective 1: Internal Management and Resourcing

In accordance with Section 10(3) of the Waste Act, each municipality authorised to carry out waste management services by the Municipal Structures Act, must designate in writing a ‘Waste Management Officer’ from its administration to be responsible for coordinating matters pertaining to waste management in that municipality. The Waste Management Officer must coordinate waste management activities in the manner set out in the national waste management strategy.

The waste management organogram requires review and the creation of new positions to ensure effective waste management. A training programme needs to be developed for induction training and on-going training for new and existing employees.

(a) Objective

- Ensure the waste department is sufficiently staffed and capacitated to fulfil its waste management mandate.

(b) Targets:

- Appoint and formally designate a sufficiently capacitated WMO, in writing, by the end of 2015/2016 financial year.
- Achieve a 10% reduction in the number of vacant posts in the waste management department annually, for the next 5 years.
- All technical staff to attend a waste training course, as appropriate, and to be revised on at least a 5 year cycle.

#### **4.2.2 Objective 2: Waste Information Management**

Appropriate waste information management is lacking, and needs to be improved through developing a system for sourcing, collating and reporting required information.

The National Waste Information Regulations require municipalities to be registered on the South Africa Waste Information Centre (SAWIC) and to report on the SAWIC on a quarterly basis. This is not currently being done. All requirements of the Waste Information Regulations need to be implemented.

There is currently no data on disposal tonnages for the NLM. There is currently no comprehensive information available on the types of waste which currently constitute the general domestic waste stream in the area. As no waste characterisations have been undertaken in the NLM there is no data available on the composition of the domestic waste stream. Waste characterisation should be undertaken to understand the composition of the domestic stream.

(a) Objective

- Management of waste information in a manner that makes it accessible and useful, and that complies with the Waste Information Regulations.

(b) Targets

- Establish an appropriate Waste Information Management System by 2016.
- Registration on the SAWIC.
- Reporting quarterly on the SAWIC.
- Generate approximate disposal tonnages at Nondweni landfill site by recording the size of vehicles (e.g. 2 ton or 8 ton), how full vehicles are, and the type of waste being disposed of.
- Undertake at least one characterisation exercise of domestic waste stream in the NLM, annually.

#### **4.2.3 Objective 3: Compile Waste Management By-Laws and Address Illegal Dumping**

The NLM needs to draft waste management by-laws in line with the NEMWA and to provide a penalties structure. Together with the drafting of the by-laws, NLM should develop an enforcement plan to guide enforcement. The plan should consider:

- Fining protocols
- How to apply penalties
- Recovery systems
- Required resources

The lack of resources for enforcement is a significant limiting factor and the appropriate human and financial resources must be allocated if enforcement is going to be successful. At least one Waste Ranger post should be created, and filled once the by-laws are adopted. The ranger's mandate should be the enforcement of the waste management by-laws. All existing NLM peace officers need to receive regular training on the waste management by-laws and their implementation.

Illegal dumping is the result of various weaknesses in a waste management system, including infrastructure and service provision, public awareness, and enforcement. Illegal dumping is a problem for the NLM but the scale of the challenge has never been quantified. No mapping of the dumping hotspots has been undertaken, nor has the clean-up costs been quantitated.

The NLM should undertake a map based study of the illegal dumping hotspots, determine remediation costs and then remove the current waste. Illegal dumping will be reduced through the provision of regular audits, improved enforcement and transfer facilities and public awareness campaigns.

(a) Objective

- Raise public awareness of the waste management by-laws, to enforce them appropriately and thereby reduce illegal dumping in the NLM area.

(b) Targets

- Draft and adopt waste management by-laws by end of 2015/16 financial year.
- Develop an enforcement plan and system for maintaining electronic records of enforcement actions.
- Appoint one waste ranger.
- Undertake a dumping hotspot assessment and update this annually. The locations and size of the hotspots are to be mapped to determine clean-up costs and prevention actions.
- Reduce the number of hotspots by 10% annually over the next 5 years.

#### **4.2.4 Objective 4: Waste Minimisation**

The National Domestic Waste Collection Standards (GN 21 of 2011) mandate the NLM to provide an enabling environment for household recycling and the National Waste Management Strategy requires 25% of recyclables to be diverted from landfill sites by 2016.



The NLM is currently not facilitating recycling. NLM will need to create an enabling environment for recycling through a multi-pronged approach of different initiatives including raising awareness and provision of recycling facilities. The development of accessible recycling drop-off centres in the main centres is considered central to raising the profile of recycling in the area. The NLM should consider entering into agreements with private recycling companies to provide collection services at the centre. The success of the drop-off centre will be measured through the volumes of recyclables processed at the facility.

A feasibility study should be undertaken to determine suitable locations to develop a drop-off facilities.

(a) Objective

- Create an enabling environment for waste minimisation and recycling and monitor it.

(b) Targets

Due to the lack of existing tonnages for recycled material, no specific numerical performance targets have been set, however the following are proposed to ensure that these activities are commenced.

- Provide at least one recycling drop off facilities in Nquthu by 2016/2017. All future transfer stations to have recycling drop-off facilities.

#### **4.2.5 Objective 5: Waste Collection**

The National Waste Management Strategy requires municipalities to provide 95% of urban households and 75% of rural households with adequate levels of waste collection services. At present only 9.1% of households receive a collection service and 81.8% use their own refuse dump. The NLM is currently not meeting the objectives of the National Waste Management Strategy. Factors limiting waste in the NLM are the large transportation distances and the rural nature of the majority of households. While it is not feasible for NLM to provide waste collection services to meet the targets of the National Waste Management Strategy, the NLM must aim to extend the geographical range of waste collection services. The NLM needs to investigate the most appropriate method of providing refuse removal services to these areas, but a system of communal skips is proposed as a possible cost effecting option.

(a) Objective

- To provide a reliable weekly collection service in urban areas and to continuously expanded waste collection services into the peri-urban and rural areas as feasible.

(b) Targets

- The NLM is to document a plan for collection systems (likely to be communal skip) to the rural areas. This should indicate target expansion areas, anticipated timeframes and associated costs.
- A vehicle maintenance and replacement roster is to be developed for all waste collection vehicles to ensure they remain operational.

#### **4.2.6 Objective 6: Waste Transfer and Disposal**

There is a need to improve waste facilities in the NLM. The Nondweni landfill site is not meeting permit requirements and the Nquthu landfill site has been closed but not fully rehabilitated and no replacement site or transfer station has been developed. At present the NLM is transporting waste from Nquthu and Nquthu township 70 km (one way) to the Endumeni landfill site near Glencoe in the Endumeni LM. The transportation costs are high.

The Nquthu landfill site has been closed and hence a transfer station is required in Nquthu. This will serve the purpose of reducing the distance that has to be travelled by collection vehicles as well as providing a place where the public can drop off garden waste (and thereby reduce illegal dumping).

The Nondweni landfill site is not being managed correctly. If this site is to be operated further, cells need to be constructed and waste should be covered and compacted daily. Permit requirements should be adhered to and a landfill management plan should be developed for the site and the issues addressed to ensure the site is compliant with permit requirements. Objective

- To provide the public with an accessible waste transfer and disposal system.

##### **(a) Targets**

- Undertake a transfer station feasibility study (including site selection process) for a transfer station, to service Nquthu, by 2016.
- Compile a landfill management plan for Nondweni landfill site by 2015, and address non-compliances with permit requirements.

#### **4.2.1 Objective 7: Waste Management Awareness**

A lack of public waste management awareness was identified as a key issue in this IWMP process. The National Waste Management Strategy requires that 80% of local municipalities and 80% of schools are running waste management awareness campaigns by 2016.

There is a real need for an ongoing awareness programme for waste issues, especially regarding waste minimisation, the location of waste disposal facilities and how to dispose of waste correctly. The by-laws, once drafted will need to be communicated to residents and businesses. Such a programme should engage schools, businesses and residential areas, and should include peri-urban areas. The NLM also needs to support other awareness initiatives such as the DEA's Youth Jobs in Waste programme.

(a) Objective

- To ensure a programme of ongoing waste awareness campaigns in NLM area.

(b) Targets

- Establish an annual programme of awareness campaigns at the beginning of each year.
- Undertake a minimum of 4 awareness interventions per year.

**4.2.2 Objective 8: Tariff structure and customer database**

There is generally insufficient communication between the finance department, responsible for tariffs and billing, and the waste department. Interviews with the municipal billing office confirmed that while a tariff system is in place, there has yet to be a full reconciliation done whereby the frequency of collection services given to individual businesses is compared to the current billing system. It is possible that some businesses are being undercharged.

(a) Objective

- To ensure that residents and businesses are charged in a fair manner, according to the service they receive.

(b) Targets

- Undertake a full review of tariffs charged and collections services delivered to ensure that businesses are not undercharged. Repeat every 5 years.

## 5 *Implementation Plan*

This section presents a plan by which the NLM aims to meet the objectives defined in the previous section. The plan consists of a number of projects and initiatives which, if appropriately executed, should move the NLM towards realising these objectives. An implementation programme is presented in the table below. It is however acknowledged that the NLM faces numerous challenges in the implementation of these projects including financial and human resource limitations. It is therefore expected that the implementation programme may be modified during the next 5 year period as resource allocation changes.

### 5.1 **Project Details**

This section presents detailed descriptions of the projects proposed for the next 5 year period.

**Table 21: Priority Projects and Preliminary Action Plan**

No	Project	Actions	Priority Rating	2016	2017	2018	2019	2020
1.1	Management and resourcing	Formally designate a Waste Management Officer.  Section 10(3) of NEMWA requires this. The prospective WMO must be competent, have the appropriate technical knowledge, receive appropriate training as required and sign acceptance of the responsibilities as specified in the NEMWA. The DEA guideline on appointing WMOs should guide the process.	High	X				
1.2		Review organogram based on the needs of fulfilling the requirements of this IWMP.	Medium	X				
1.3		Create and fill new posts as required.	Medium		X	X		
1.4		Formal job descriptions to be drafted for all positions within the waste management function. These should specify technical knowledge and experience requirements.	Low	X	X			
1.5		Induction training: All new staff to undergo technical training within 6 months of appointment.	High	X	X	X	X	X
1.6		All technical staff to attend a waste training course, as appropriate, and to be revised on at least a 5 year cycle. Landfill site supervisors to receive focused training on landfill operations.	Medium	X	X	X	X	X
1.7		Procure a backup supply of PPE.  Due to protracted supply chain processes, the municipality does, from time to time, run out of PPE. An appropriate reserve supply should be procured and held in storage for such occasions.	High	X	X			

No	Project	Actions	Priority Rating	2016	2017	2018	2019	2020
1.8		The waste management budget is to be reviewed, and all costs associated with the implementation of this IWMP are to be specified so as to determine the funding shortfall over the next five years.	High	X				
2.1	Waste information management	Establish an appropriate Waste Information System for sourcing, collating, storing and reporting required information including: <ul style="list-style-type: none"> <li>• Information required in terms of the by-laws.</li> <li>• Recycling information</li> <li>• Collection disposal tonnages</li> <li>• Disposal certificates</li> <li>• Facility permits.</li> <li>• Details of awareness programmes.</li> <li>• Details of illegal dumping hotspots.</li> </ul>	High	X				
2.2		NLM to undertake a review of the Waste Information Regulations and comply.	Medium	X	X			
2.3		Register NLM on SAWIC and report tonnages as required.	High	X				
2.4		Train landfill attendants. The Nondweni landfill site should be manned by an attendant who estimates the volume disposed based on the size and fullness of the vehicle. Training will be required.	High	X	X			
2.5		Undertake at least one characterisation exercise of domestic waste stream in the NLM, annually. This should rotate between areas, between business and residential areas, and those of higher and lower income.	Low	X	X	X	X	X
3.1	Waste management by-laws and address	Develop and adopt waste management laws. Waste management by-laws to include the requirements of NEMWA.	High	X	X			

No	Project	Actions	Priority Rating	2016	2017	2018	2019	2020
3.2	illegal dumping.	Develop an enforcement plan to guide to process of enforcing waste by-laws. It should consider fining protocols, how to apply penalties and recovery systems and general involvement of peace officers. It should also consider electronic records management.	Medium		X	X		
3.3		Create one new Waste Ranger position and fill it.  The Waste Ranger should be trained on waste management and the content of the by-laws and be empowered to issue fines.	High	X				
3.4		Provide bi-annual training on the Waste Management By-laws to all existing Peace Officers.	Medium		X		X	
3.5		Run a campaign to ensure all waste service providers are registered with the NLM.	Medium	X	X			
3.6		Undertake a dumping hotspot assessment and update this annually. The locations and size of the hotspots are to be mapped to determine clean-up costs and prevention actions. Remediate existing hotspots, and implement dumping prevention measures (e.g. signage, barriers etc.).	High	X	X	X	X	X
4.1	Waste Minimisation	Provide recycling drop off facilities in Nquthu by 2018. The drop-off centre will need to be designed to have receptacles for receiving and storing recycled waste, a hard standing area to accommodate these, and a covered area to allow limited sorting. This may be combined with a transfer station if the feasibility study concludes it is appropriate. Future transfer stations to have recycling drop-off facilities.	Medium	X	X	X		
4.2		Local recycling co-op: The NLM should support the development of one local recycling co-op. The co-op could be based in the proposed Nquthu drop off centre / transfer station.	High			X	X	

No	Project	Actions	Priority Rating	2016	2017	2018	2019	2020
4.3		<p>Internal recycling programme: The NLM needs to lead by example and establish an internal paper recycling programme for all NLM municipal offices. An experienced contractor should be appointed to ensure the system is sustainable. Contractor tasks should include:</p> <ul style="list-style-type: none"> <li>• Provision of recycling bins/containers</li> <li>• Provision of education and awareness to NLM staff</li> <li>• Collection of recyclables.</li> <li>• Expanding the programme to other waste streams to ensure that costs are recoverable.</li> <li>• Appropriate monitoring of the volume of paper recycled.</li> </ul>	Low	X	X			
4.4		Installation of a chipper at the Nondweni landfill site. The use of the chipper would reduce the volume of waste being disposed of at the landfill site. The chipped waste could either be composted in a municipal programme or provided free of charge to farmers or the public for private composting,	Low				X	X
5.1	Waste Collection	Compile a plan for expanding communal skip collection systems to the rural areas. This should indicate target expansion areas, anticipated timeframes and associated costs. Skips will have to be purchased.	Medium	X	X	X		
5.2		Extend collection service (communal skips) to one un-serviced area by 2016/17	Medium		X			
5.3		Extend collection service (communal skips) to one un-serviced area by 2017/18.	Medium			X		
5.4		A vehicle service, maintenance and replacement roster is to be developed for all waste collection vehicles to ensure they remain operational.	Medium	X				
5.5		Undertake a collection route optimisation exercise to ensure that collections are being undertaken efficiently as possible.	Medium		X			



No	Project	Actions	Priority Rating	2016	2017	2018	2019	2020
6.1	Waste Transfer and Disposal	Determine the way forward for the Nquthu landfill site. The site should either be rehabilitated or upgraded and reopened once social, political and environmental issues are addressed.	High	X	X	X		
6.2		Construct a waste transfer facility in Nquthu by 2018.	High	X	X	X		
6.3		The high transportation distances from Nquthu to the Endumeni landfill site necessitate the construction of a transfer station where waste can be temporarily stored before transportation. Waste separation facilities to be included (see 4.1)						
6.4		Nondweni landfill management plan.	High	X	X			
		The Nondweni landfill site is not being managed according to permit conditions. A management plan is required for the site to address non-compliances with permit requirements. Key topics to be addressed include permit conditions, permissible waste types, compaction, cover material, access control, fire management, record keeping and monitoring.						
		Review of Nondweni landfill permit.	Low	X	X			
		A review of the permit is required to identify short comings with regards to management and infrastructure at the site.						
7.1	Waste Management Awareness	Plan the annual calendar of awareness campaigns for each year.	High	X	X	X	X	X
7.2		Recycling awareness campaign: Undertake at least four recycling awareness campaigns annually to raise awareness.	Medium	X	X	X	X	X
7.3		Support at least one government or private training and awareness initiatives, where appropriate, per year.	Medium	X	X	X	X	X
7.4		Information leaflet: "How to handle your waste": Compile a "how to handle to	Low		X			X

No	Project	Actions	Priority Rating	2016	2017	2018	2019	2020
		<p>your” information leaflet which address:</p> <ul style="list-style-type: none"> <li>• The relevant municipal departments and key contacts.</li> <li>• A refuse collection schedule</li> <li>• Kerb-side collections: What is acceptable, what is not and how to tell the difference.</li> <li>• Recycling: What is recyclable, separating at source, and where to drop-off.</li> <li>• Hazardous waste: What to do with your hazardous domestic waste.</li> <li>• Illegal dumping, by-laws and the applicable fines.</li> <li>• Public waste management facilities such as transfer stations.</li> </ul> <p>Update this every 3 years.</p>						
8.1	Tariff structure and customer database	Undertake a full reconciliation of actual collection services being delivered to businesses and the current tariff billing system. This should be a joint initiative between the Waste Department and the Finance department. This is to be repeated every 5 years.	High	X				X
8.2		Establish an official line of communication between the Waste and Environment Department.	High	X				
9.1	Monitoring	Implement an IWMP implementation monitoring system: Undertaken short review of progress against the IWMP implementation plan on an annual basis. Compile report as required in terms of Section 13 of NEMWA.	High	X	X	X	X	X

## **6 Conclusion and Way Forward**

### **6.1 Approvals**

This IWMP will require council approval prior to it being adopted and implemented by the Waste Management Sub-directory. The plan will also, as required by the National Environmental Management: Waste Act (59 of 2008), require approval by the provincial environmental Member of Executive Council.

### **6.2 Public Participation**

The Municipal Systems Act contains extensive provisions pertaining to public participation. This IWMP should be subject to an appropriate Public Participation Process (PPP) before it is accepted as final by the NLM council.

### **6.3 Monitoring and Progress of the IWMP**

Regular and ongoing monitoring of the IWMP is required to ensure the objectives of the IWMP are accomplished. Monitoring of the success of projects during the IWMP implementation phase will ensure that corrective action is taken when necessary.

There is a legal requirement under section 13(2) of NEMWA for reports on IWMP implementation to be compiled. The reports must present:

- a) the extent to which the plan has been implemented during the period;
- b) the waste management initiatives that have been undertaken during the reporting period;
- c) the delivery of waste management services and measures to be taken to secure the efficient delivery of waste management services, if applicable
- d) the level of compliance with the plan and any applicable waste management standards;
- e) the measures taken to secure compliance with waste management standards;
- f) the waste management monitoring activities;
- g) the actual budget expended on implementation of the plan;
- h) the measures that have been taken to make any necessary amendments to the plan;
- i) in case of a province, the extent to which municipalities comply with the plan and in the event of a non-compliance with the plan, the reasons for such a non-compliance

#### **6.3.1 IWMP Close-down Report**

The IWMP close down report is produced at the end of the IWMP 5 year implantation period and is used to review the success of projects. A closedown report should be completed at the end of 2020 to summarise the implementation of projects for the period 2016- 2020.

## 7 *References*

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## Appendix A

### Policy and Legislation

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## 8 *Policy and Legislation*

### 8.1 Introduction

South Africa has a host of legislated acts, policies and guidelines relating to waste management, the most significant of these being the newly promulgated National Environmental Management: Waste Act (58 of 2008) which is now the country's central piece of legislation dealing with waste management. There are also certain relevant international conventions to which South Africa subscribes. This section discusses these acts, policies, guidelines and conventions thereby providing a context to waste policy and legislation. Where applicable it highlights aspects of these acts and policies which apply specifically to the local government authorities.

This section is not exhaustive but presents the broader legislative framework and highlights the more important aspects thereof.

### 8.2 International conventions

#### 8.2.1 **Basel Convention on the control of trans-boundary movement of hazardous wastes and their disposal, 1989**

The Basel Convention is a global agreement which seeks to address the trans-boundary movement of hazardous waste. The convention is centred on the reduction of the production of hazardous waste and the restriction of trans-boundary movement and disposal of such waste. It also aims to ensure that strict controls are in place when any trans-boundary movement and disposal of hazardous waste does occur, and ensures that it is undertaken in an environmentally sound and responsible manner.

The Basel Convention, held on 22 March 1989, came into effect during May 1992 after ratification by the prerequisite number of countries. South Africa ratified the Convention in 1994, with DEA being the focal point for the convention.

Whilst South Africa subsequently acceded to this Convention, no legislation was passed at the time to give effect to it. The second Basel convention, held on 8 October 2005, set standards for the control of trans-boundary movements of hazardous wastes and their disposal, setting out the categorization of hazardous wastes and the policies for their disposal between member countries. South Africa accedes to this convention and implements its provisions.

The key objectives of the Basel Convention are:

- To minimise the generation of hazardous wastes in terms of quantity and hazardousness.
- To dispose of hazardous waste as close to the source of generation as possible.

- 
- To reduce the movement of hazardous wastes.
  - Locally, draft regulations are being prepared in an effort to control the movement of such waste.

The most significant provisions of the Convention relate to the ban on certain importations and exportations; illegal traffic, bilateral, multilateral and regional agreements and the control system of the Convention.

The Basel Convention contains specific provisions for the monitoring of implementation and compliance. A number of articles in the Convention oblige parties (national governments which have acceded to the Convention) to take appropriate measures to implement and enforce its provisions, including measures to prevent and punish conduct in contravention of the Convention.

### **8.2.2 Rotterdam Convention**

The Rotterdam Convention was held in September 1998 to promote shared responsibilities in relation to importation of hazardous chemicals. One of the key provisions is the Prior Informed Consent procedure, which lists information on hazardous chemicals in Annex III. It became legally binding for its parties in 2004. The convention promotes open exchange of information and calls on exporters of hazardous chemicals to use proper labelling, include directions on safe handling, and inform purchasers of any known restrictions or bans. Parties can decide whether to allow or ban the importation of chemicals listed in the treaty, and exporting countries are obliged to make sure that producers within their jurisdiction comply. From this convention a PIC circular is distributed every six months giving updated information on the listed chemicals, member compliance and sources of supporting information.

### **8.2.3 Stockholm Convention**

In 1995 the United Nations Environment Programme called for global action to be taken on persistent organic pollutants (POPs), which pose a threat to both health and the environment. As a result, the negotiations for the Stockholm Convention on POPs were initiated and culminated in May 2001, with the convention enforced in May 2004. South Africa accedes to this convention, whereby member countries have agreed to phase out POPs, and prevent their import or export. It imposes restrictions on the handling of all intentionally produced POPs, i.e. identified highly toxic, persistent chemicals.

The 12 POPs that have been identified under the convention are aldrin, chlordane, dieldrin, dichloro-diphenyl-trichloroethane (DDT), endrin, Hexachlorobenzene (HCB), heptachlor, mirex, polychlorinated biphenyls (PCBs), toxaphene, dioxins, and furans. Of the aforementioned substances, two are still used in South Africa today (DDT and PCBs), although their use is restricted under the 'Fertiliser Act' as administered by the Department of Agriculture. The above list of chemicals is relevant, especially where there is any management of obsolete and banned pesticides.

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South Africa negotiated the continued use of DDT, as it has proved critical in the fight against malaria, and PCBs will be phased out as the electrical appliances that contain them become obsolete.

In 2005 South Africa, at the Reduce, Reuse and Recycle Ministerial Conference, became one of 7 countries to sign an agreement for the African Stockpile Programme, a project aimed at recovering and the appropriate disposal of obsolete pesticides. With funding (\$1,7million) from the World Bank, government began implementing the programme.

The country is also developing guidelines for the implementation of the Globally Harmonised System of Classification and Labelling of Chemicals. The funding was for the disposal of obsolete pesticides as part of the African Stockpile Programme. The department has begun implementing this programme throughout the country. Further work on training workers to handle chemicals was rolled out.

By mid-2007, a pilot project for the collection of all obsolete pesticides possessed by farmers in the Limpopo Province had begun, and this involved, amongst others, identification of collection points and collection of obsolete pesticides within the province. These stocks were further consolidated from various collection points to a central collection point and ultimately safeguarded and shipped to Holfontein Waste Disposal Site for temporary storage. The inventory of pilot project stocks has been undertaken. About 100 tons of labelled and unlabeled stocks of obsolete pesticides have been collected through this pilot project. The pilot project is expected to serve as a benchmark for the roll-out of projects in other provinces.

However, as the amount of obsolete pesticide stocks collected from the Limpopo pilot project is significantly higher than what was anticipated, it has become apparent that the remaining funds in the World Bank African Stockpile Programme budget will not be sufficient for national rollout of the programme. The African Stockpile Programme Project Management Unit has had numerous deliberations in an effort to come up with a sustainable solution for management of pesticides in the country<sup>1</sup>.

#### **8.2.4 London Convention on the Prevention of Marine Pollution by Dumping of Waste and Other Matters, 1972**

The London Convention on the Prevention of Marine Pollution by Dumping of Waste and Other Matter, 1972, aims to prevent marine pollution by preventing the dumping of wastes such as industrial waste, sewage sludge, dredged material and radioactive waste at sea, as well as incineration at sea. South Africa is a signatory to the convention and the associated 1996 Protocol.

This convention and its various protocols were incorporated into the following South African legislation:

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<sup>1</sup> For more information contact Ms. Nomphele Daniel, Tel: 012 310 3904, email: ndaniel@deat.gov.za



- Prevention of Pollution from Ships Act (Act 2 of 1986), and the regulations concerning the Prevention of Pollution by Garbage from Ships Regulations (GN R1490, published in Government Gazette No. 14000, dated 29 May 1992).
- The Dumping at Sea Control Act (Act 73 of 1980).

The primary responsible agency is the DEAT Sub Directorate of Marine and Coastal Pollution Management who issue permits for dredge spoils and sinking of old vessels. It occasionally issues permits for ships in trouble, typically grounded, to release their cargo into the sea.

#### **8.2.5 Local Agenda 21**

Agenda 21 is a comprehensive document for global action on the environment and sustainable development, to take the world into a more sustainable 21st century. It is probably the most important document to be adopted by the UN Conference on the Environment and Development (UNCED) at the Rio de Janeiro Summit in June 1992. The 40 chapters covered a wide range of issues including the atmosphere, oceans, land resources, poverty, etc.

It was important for each nation to develop its own local Agenda 21, in order to translate and interpret the principles of sustainable development to local areas. Local Agenda 21 focuses on developing partnerships involving the public, private and community sectors that together can resolve urban environmental management problems and strategically plan for long term sustainable environmental management.

One of the key features of sustainable development is the requirement to integrate economic and environmental factors into all decision making processes. Applications of these criteria to waste management require a new emphasis on resource and energy conservation, ensuring that supplies of raw materials, sources of energy and the quality of the physical environment can be maintained. Agenda 21 initiatives are considered to be an essential vehicle for the implementation of various aspects of the IWMP.

The key goals of Agenda 21 are:

- Sustainable development.
- Eradication of poverty.
- Elimination of threats to the environment.
- To ensure a sustainable environment.
- Creation of sustainable job opportunities.

The focus of the IWMP is to strive to attain the above goals in all facets thereof. The following seven key activities require attention in order to satisfy Local Agenda 21.

##### **(a) Activities within the Local Authority**

- (i) Garnering local political support
  - Information sessions and workshops.
  - Reports and presentation to committees.
  - Physical involvements in projects.

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- (ii) Managing and improving local authorities own environmental performance.
    - Corporate commitment.
    - Staff training and creating awareness.
    - Environmental management systems.
    - Budgeting for environmental processes.
    - Policy integration across all sectors.
  - (iii) Integrating sustainable development aims within local authorities' policies and activities
    - Economic development.
    - Tendering and purchasing.
    - Tourism and visitor strategies.
    - Health strategies.
    - Welfare, equal opportunities and poverty strategy.
    - Focused environmental services.
  - (b) Activities within the wider community
    - (iv) Awareness raising and education
      - Support for environmental education.
      - Awareness-raising events.
      - Visits and talks.
      - Support for voluntary groups.
      - Publication of local information.
      - Press releases.
      - Initiatives to encourage behavioural change and practical actions.
    - (v) Consulting and involving general public
      - Public consultation processes.
      - Interaction with NGO's/forums.
      - Focus groups.
      - Feedback mechanisms
    - (vi) Forging partnerships with other interest groups and activities, such as:
      - Meetings, workshops and conferences.
      - Working groups/advisory groups.
      - Round table discussions.
      - Comprehensive Urban Plan.
      - International and regional partnerships.
    - (vii) Measuring, monitoring and reporting on progress toward sustainability
      - Environmental monitoring.
      - Sustainability indicators.
      - Targets.
      - Environmental Impact Assessments.
      - Strategic Environmental Assessment.

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## 8.3 South African Legislation

### 8.3.1 Constitution of the Republic of South Africa (1996)

The South African Constitution (Act 108 of 1996) is the supreme law of South Africa. Any law or conduct that is inconsistent with it, is invalid, and the obligations imposed by it must be fulfilled. Therefore, as such, all law, including environmental and waste management planning must consider compliance with the Constitution of South Africa.

The Constitution contains a Bill of Rights, set out in Sections 7 to 39. The Bill of Rights applies to all law and binds the legislature, the executive, the judiciary and all organs of state. A provision of the Bill of Rights binds a natural or a juristic person if, and to the extent that it is applicable, taking into account the nature of the right and the nature of the duty imposed by the right.

Section 24 of the Constitution guarantees everyone the right to:

An environment that is not harmful to their health or wellbeing; and to have an environment protected for the benefit of present and future generations, through reasonable legislative and other measures that:

- Prevent pollution and ecological degradation.
- Promote conservation. and
- Secure ecologically sustainable development and use of natural resources while promoting justifiable economic or social development.

The environmental rights (section 24), is strengthened by other relevant fundamental rights, such as the rights of access to information and administrative justice.

#### (c) National and Provincial authority competence

General obligations imposed by the constitution on national and provincial government institutions are adjudicated, as the Constitution establishes an administrative framework for all organs of state. The national and provincial governments are concurrently entitled to legislate on matters stipulated in Schedule 4 of the Constitution. Both spheres of government have legislative competence over areas that will impact on management in the natural/urban interface, like environment, disaster management, nature conservation and pollution control, and would therefore also frame related matters such as waste management. It should also be noted that the Constitution contemplates the assignment, from national Government to the provinces, of functions that would normally be the exclusive preserve of the former.

Subsection 24(b) of the Constitution relates to the constitutional imperative requiring government to enact appropriate environmental law reform legislation. This led to the promulgation of the National Environmental Management Act (Act 107 of 1998, NEMA)<sup>2</sup> and

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the National Water Act (Act 36 of 1998)<sup>3</sup> amongst others. More specifically to the objective of this framework is the National Environmental Management: Waste Act, which was recently enacted<sup>4</sup>.

Important to the development of a local integrated waste management strategy and plan is that in accordance with Section 155(6) of the Constitution each provincial government must establish municipalities in its province and, by legislative or other measures, must –

- (1) provide for the monitoring and support of local government in the province; and
- (2) promote the development of local government capacity to enable municipalities to perform their functions and manage their own affairs.

Furthermore in according to Section 155(7) the national government and the provincial governments have the legislative and executive authority to see to the effective performance by municipalities of their functions in respect of matters listed in Schedules 4 and 5, by regulating the exercise by municipalities of their executive authority referred to in section 156 (1).

(d) Local authority competence

National and provincial government are both obliged, by legislative and other measures, to support and strengthen the capacity of municipalities to manage their affairs, to exercise their powers and perform their functions within the individual municipal jurisdiction. This responsibility is covered in Chapter 7:

In terms of section 152 of the Constitution the objects of local government are to:

- Provide democratic and accountable government for the local community.
- Ensure the provision of services to communities in a sustainable manner.
- Promote social and economic development.
- Promote a safe and healthy environment. and
- Encourage the involvement of communities and community organisations in the matters of local government.

A municipality must in terms of section 153 structure and manage its administration and budgeting and planning processes to give priority to the basic needs of the community and participate in national provincial development programmes.

National and provincial government are also obliged to assign to a municipality, by agreement and subject to any conditions, the administration of matters listed in the relevant parts of Schedules 4 and 5 and any other matter which would be most effectively administered locally, provided that the municipality has the capacity to administer it. A

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municipality has the right to exercise any power concerning a matter reasonably necessary for, or incidental to, the effective performance of its functions.

Those areas of the urban/natural interface zone that fall within the legislative and jurisdictional competence of provincial or local authorities (for example a road reserve or urban areas that border a park) fall to be regulated by those authorities. The Constitution aims to co-ordinate the different levels of government and the management of the issues which the public institutions constituted or confirmed by them are charged with governing. This requires co-operation on the part of different organs of state. The above statements become pertinent to waste management as it sets the context of the administrative activities convened at the Local government level. In addition, related to local government in terms of section 152(1)(d) of the constitution, one of the objectives of local government is “to promote a safe and healthy environment”.

Municipalities are further charged with making, administering and enforcing by-laws for the effective administration of the matters of which they have the right to administer. Any bylaw that conflicts with national or provincial legislation is deemed invalid. In accordance with Section 160(4) no bylaw may be passed by a Municipal Council unless all the members of the Council have been given reasonable notice; and the proposed by-law has been published for public comment. Furthermore, in accordance with Section 162 no bylaw may be enforced unless it has been published in the relevant official provincial gazette and the bylaw must be accessible to the public.

### **8.3.2 National Environmental Management Act (Act 107 of 1998)**

The National Environmental Management Act (Act 107 of 1998) commonly known as “NEMA” gives effect to the “Environmental Right” of the Constitution and is South Africa’s overarching framework for environmental legislation. The objective of NEMA is to provide for operative environmental governance by establishing principles for decision-making on matters affecting the environment, institutions that will promote co-operative governance, and procedures for co-ordinating environmental functions exercised by organs of state. An important function of the Act is to serve as an enabling Act for the promulgation of legislation to effectively address integrated environmental management.

NEMA sets out a number of principles that aim to implement the environmental policy of South Africa. These principles are designed to serve as a framework for environmental planning, as guidelines by which organs of state must exercise their functions and to guide other laws concerned with the protection or management of the environment.

The principles include a number of internationally recognized environmental law norms and some principles specific to South Africa. These core principles include:

- Accountability.
- Affordability.
- Cradle to Grave Management.
- Equity.
- Integration.

- Open Information.
- Polluter Pays.
- Subsidiary.
- Waste Avoidance and Minimisation.
- Co-operative Governance.
- Sustainable Development.
- Environmental Protection and Justice.

Chapter 2: Sections 3 to 6 of NEMA, make provision for the establishment of the Committee for Environmental Co-ordination. The objective of the committee is to promote the integration and co-ordination of environmental functions by the relevant organs of state and in particular to promote the achievement of the purpose and objectives of environmental implementation plans and environmental management plans.

Chapter 5: Sections 23 to 24 of NEMA is designed to promote integrated environmental management and provide tools for integrating environmental activities. Environmental management must place people and their needs at the forefront of its concerns, and serve their physical, psychological, developmental, cultural and social interests equitably. . This chapter of NEMA requires any activity that can potentially impact on the environment, socio-economic conditions and cultural heritage require authorisation or permission by law and which may significantly affect the environment, must be considered, investigated and assessed prior to their implementation and reported to the organ of state charged by the law with authorising, permitting or otherwise allowing the implementation of an activity. Development must be socially, environmentally and economically sustainable. Sustainable development therefore requires the consideration of all relevant factors, some of which include the following:

- The disturbance of ecosystems and loss of biological diversity is to be avoided, or, minimised and remedied.
- The pollution and degradation of the environment are to be avoided, or, minimised and remedied.
- Waste is to be avoided, or, minimised and re-used or recycled where possible and otherwise disposed of in a responsible manner.
- A risk-averse and cautious approach is to be applied.
- Negative impacts on the environment and on the people's environmental rights must be anticipated and prevented, and where they cannot be altogether prevented, must be minimised and remedied.

Section 24(5) of NEMA was enacted through the promulgation of the Environmental Impact Assessment (EIA) Regulations published in 2006 and revised in 2010. The construction of facilities or infrastructure including associated structures or infrastructure for the recycling, re-use, handling, temporary storage or treatment of general waste and hazardous waste, were originally listed in these regulations and therefore required either a Basic Assessment or a Scoping and EIA Process to be followed depending on specific listed criteria. However, the above mentioned waste activities have now been repealed and instead require a license application under the Waste Act.

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Chapter 7: Sections 28 to 30, imposes a duty of care in respect of pollution and environmental degradation. Any person who has caused significant pollution or degradation of the environment must take steps to stop or minimise the pollution. Where an incident occurs that is potentially detrimental to the environment, the person who is responsible for the incident or the employer must, within 14 days of the incident, report to the Director-General, provincial head of department and municipality. The relevant authority may specify measures to address the problem and remediate the area within 7 days. The Acts also attach consequences for breaching the duty of care, namely that government authorities are empowered to issue directions and to remediate the situation and recover costs where the directions are not complied with.

Chapter 8: Sections 35, provides that the Minister and every MEC and municipality may enter into an environmental management co-operation agreement with any person or community for the purpose of promoting compliance with the principals laid down in NEMA. Environmental Co-operation Agreements may contain an undertaking by the person or community concerned to improve the standards laid down by law for the protection of the environment and a set of measurable targets and a timeframe for fulfilling the undertaking.

Chapter 9 allows the Minister to make model By-Laws aimed at establishing measures for the management of environmental impacts of any development within the jurisdiction of the municipality, which may be adopted by the municipality as By-Laws. Any municipality may request the Director-General to assist it with its preparation of By-Laws on matters affecting the environment and the Director-General may not unreasonably refuse such a request. The Director-General may institute programmes to assist municipalities with the preparation of By-Laws for the purposes of implementing this Act.

### **8.3.3 Environment Conservation Act (73 of 1989)**

The Environment Conservation Act (73 of 1989) (ECA) predates the Constitution and, although many sections have already been repealed, certain sections are still in place.

The objectives of the ECA are to provide for the effective protection and controlled utilisation of the environment. Several sections of the ECA were repealed through the enactment of NEMA and certain responsibilities were assigned to the provinces.

The NEMWA has repealed sections of the ECA dealing with waste management. More specifically these repealed sections are:

- 19: Prohibition of littering. This is now dealt with under Section 27 of the NEMWA.
- 19A: Removal of litter.
- 20: Waste Management. This section dealt with permitting of waste facilities, but is now replaced by Chapter 5 (Sections 43 – 59) of the NEMWA.

Waste management, more specifically with regard to landfill disposal site permitting and related matters, was until its recent repeal through the Waste Act, coordinated and controlled under Section 20 of the ECA, as follows.

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In order to implement section 20 of the ECA, DWAF previously issued the above mentioned permits subject to specified conditions stipulated in the DWAF Minimum Requirements: Waste Management Series5.

- 24: This section provided the framework for waste regulations to be formulated. This issue is now covered by Chapter 8, Part 1 (Regulations) (Sections 69 – 71) of the NEMWA.
- 24A, 24B and 24C: Similarly these sections which dealt with regulations regarding littering, products, and procedures for making regulations respectively are now addressed by Chapter 8, Part 1 of the NEMWA.
- 29: Sections (3) and (4), which deal with Offences and Penalties have been substituted by the NEMWA.

Despite the fact that the NEMWA repeals section 19,19A, 20, 24, 24A 24B, and 24C of the ECA, it should be noted that in accordance with Section 80(2) of the Waste Act, any regulations or directions made in terms of these repealed sections of the ECA, remain in force and are considered to have been made under the Waste Act.

### **8.3.4 National Environmental Management: Waste Act (59 of 2008)**

#### **(e) Overview**

The National Environmental Management: Waste Act (59 of 2008) (NEMWA) was promulgated on 01 July 2009, marking a new era in waste management in South Africa (with the exception of a number of sections which will be brought into effect at dates still to be gazetted). The act covers a wide spectrum of issues including requirements for a National Waste Management Strategy, IWMPs, definition of priority wastes, waste minimisation, treatment and disposal of waste, Industry Waste Management Plans, licensing of activities, waste information management, as well as addressing contaminated land.

However, South African waste management legislation is still fragmented. Mining; radio-active waste; disposal of explosives; and disposal of animal carcasses, which are covered by specific other regulations is not addressed by the act. NEMWA does however constitute South Africa's overarching primary waste legislation.

#### **(f) Objectives of NEMWA**

The National Environmental Management: Waste Act's objectives are -

To protect health, well-being and the environment by providing reasonable measures to -

- Minimising the consumption of natural resources.
- Avoiding and minimising the generation of waste.
- Reducing, re-using, recycling and recovering waste.
- Treating and safely disposing of waste as a last resort.
- Preventing pollution and ecological degradation.
- Securing ecologically sustainable development while promoting justifiable economic and social development.
- Promoting and ensuring the effective delivery of waste services.



- Remediating land where contamination presents, or may present a significant risk of harm to health or the environment. and
- Achieving integrated waste management reporting and planning.
- To ensure that people are aware of the impact of waste on their health well-being and the environment.
- To provide for compliance with the measures set out in paragraph (a) and
- Generally, to give effect to section 24 of the Constitution in order to secure an environment that is not harmful to health and well-being.

The Chapters and topics of the Waste Act are as follows:

Chapter 1 - Interpretation and Principles

Chapter 2 - National Waste Management Strategy, Norms and Standards

Chapter 3 - Institutional and Planning Matters

Chapter 4 - Waste Management Measures

Chapter 5 - Licensing of Waste Management Activities

Chapter 6 - Waste Information

Chapter 7 - Compliance and Enforcement

Chapter 8 - General Matters.

#### (g) Roles and Responsibility

The Act establishes a national framework for waste planning, regulation and management with roles for all spheres of government, specifically:

- National government is tasked with establishing a national waste management strategy, including norms, standards and targets. National norms and standards may cover all aspects of the waste value chain, from planning to service delivery. Of particular importance from an intergovernmental perspective are the powers of national government with respect to norms and standards for:
- The regionalization of waste management services.
- Tariffs for waste services provided by municipalities, including providing for tariffs to be imposed to provide for waste management infrastructure or facilities and ensuring that funds obtained from the provision of waste services are used for the delivery of these services.
- Provincial governments are tasked with the implementation of the national waste management strategy and national norms and standards, and may set additional, complementary provincial norms and standards. The Waste Act notes that these norms and standards must amongst other things facilitate and advance regionalization of waste management services.
- Local governments are required to ensure the universal and sustainable delivery of services, subject to national and provincial regulation. In particular, they are required to maintain separate financial statements, including a balance sheet of the services provided.

The table below lists sections of the act which make specific demands on Local (municipal) government: Tasks falling under sections of the act which have yet to be enacted have not been listed. While certain sections of the text are taken verbatim from the Act, interpretation has been added.

Table 22: Tasks required by NLM in terms of NEMWA.

TOPIC	SECTION	REQUIREMENT
General duty	3	The state <b>must</b> put in place measures that seek to reduce the amount of waste generated, and where waste is generated, ensure that it is re-used, recycled and recovered in an environmentally sound manner.
Waste service standards	9 (1) & (2)	The municipality must deliver waste management services, including waste removal, storage and disposal services in adherence to the national and provincial norms and standards (section 7 and 8 of the Act); whilst: <ul style="list-style-type: none"> <li>Integrating the IWMP and IDP</li> <li>Ensuring access to services</li> <li>Ensuring affordable service delivery</li> <li>Ensure effective and efficient Sustainable and Financial management</li> </ul>
	9 (3)	The Municipality may furthermore set local standards: <ul style="list-style-type: none"> <li>For separating, compacting and storing waste</li> <li>Management of solid waste, i.e.: Avoidance, Minimisation, Recycling</li> <li>Coordination of waste to relevant treatment or disposal facilities</li> <li>Litter control</li> </ul>
Designation of Waste Management Officers	10(3)	The Municipality must designate in writing a waste management officer from its administration to be responsible for coordinating matters pertaining to waste management in that municipality
Integrated Waste Management Plans	11 (4) & (7)	<ul style="list-style-type: none"> <li>The Municipality must submit an IWMP to the MEC for approval (response from the MEC must be given within 30 days)</li> <li>Include the approved IWMP into its IDP</li> <li>Follow the consultative process in section 29 of the Municipal Systems Act (separately or as part of IDP)</li> </ul>
	12	<ul style="list-style-type: none"> <li>Contents for IWMP's, includes: <ul style="list-style-type: none"> <li>A situational analysis</li> <li>a plan of how to give effect to the Waste Act</li> <li>municipal waste management and services obligations</li> <li>prioritisation of objectives</li> <li>setting of targets</li> <li>planning approach to any new disposal facilities; and</li> <li>Financial resourcing.</li> </ul> </li> </ul>
	13	An annual performance report prepared in terms of section 46 of the Municipal Systems Act must contain information on the implementation of the municipal IWMP.

(h) Industry Waste Management Plans

For industries, the Waste Act states that either the Minister or the relevant provincial MEC may under certain conditions and by written notice or by notice in the Gazette require a person or industry to prepare and submit an Industry Waste Management Plan.

(i) Waste Licensing for listed Activities

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The Minister has subsequently gazetted (on 03 July 2009) GN No. 718 (Gazette No. 32368) and 719 (Gazette No. 32369) which present a Waste Management Activity Lists describing those waste activities, and thresholds, which require authorisation before they are undertaken. NEMWA Schedule 1 (Section 19) identifies activities which require a waste management licence. Activities include:

- Storage and transfer of waste.
- Recycling and recovery.
- Treatment of waste.
- Disposal of waste on land.
- Storage, treatment and processing of animal waste.
- Expansion or decommissioning of facilities and associated structures and infrastructure.

Either a Basic Assessment or Scoping and Environmental Impact Assessment (EIA) process is to be carried out with regards to acquiring a licence as stipulated in the environmental impact assessment regulations made under section 24 (5) of NEMA).

(j) Integrated Waste Management Planning

The Waste Act also places considerable emphasis on the development of an integrated waste planning system, through the development of interlocking Integrated Waste Management Plans (IWMPs) by all spheres of government and specified waste generators. This planning system is the primary tool for cooperative governance within the sector. While the requirement for these plans is new for national and provincial governments, and for waste generators, this is not the case for local governments who had been able to voluntarily prepare such plans within their Integrated Development Plans (IDPs). IWMPs are mandatory for national and provincial government and specified waste generators, but the situation for local government is made a little more ambiguous by the Constitutional assignment of concurrent powers to provincial and local governments in this respect, with only limited authority assigned to national government.

(k) Norms, standards, tariffs and financial Management Systems

Other focal areas of the Waste Act include provisions for the development of norms and standards, tariffs and financial management systems. These powers all largely repeat existing national or provincial powers that are provided for in other legislation. The key change is that the Minister of Environmental Affairs now assumes these powers in terms of the Act, although concurrently with other authorised Ministers notably in Local Government and Finance portfolios.

Certain sections of the act have yet to be enacted, including the following:

- Section 28 (7), which makes allowance for of a person, category of person or industry to compile and submit an industry waste management plan for approval to the MEC, without being required to do so by the MEC.
- Part 8 (Section 35-41), which deals with contaminated land.

Section 46, which allows the licensing authority to require an applicant seeking a waste management licence to appoint an independent and qualified person to manage the application.

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### **8.3.5 National Environmental Management: Air Quality Act (39 of 2004)**

Appropriate consideration must be given to the emissions arising from waste management practices, processes and procedures. Many facets of waste management are associated with atmospheric emissions, for example, waste transportation is associated with carbon dioxide released from vehicles, and methane and carbon dioxide which are released from landfill sites.

The Air Quality Act was published in the Government Gazette on 24 February 2005 and came into effect in September 2005. This Act, amongst others, provides for the implementation of a National Framework, of national, provincial and local ambient air quality and emission standards and air quality management plans. These implementations are currently in progress.

### **8.3.6 Atmospheric Pollution Prevention Act (45 of 1965)**

Prior to the Air Quality Act coming into full effect, the control of atmospheric emissions of noxious, hazardous and nuisance causing materials was controlled by the Atmospheric Pollution Prevention Act (APPA) and its amendments. The administration of the APPA has been assigned to the Air Pollution Control Department under the Department of Environmental Affairs & Tourism.

Those sections addressing the management of dust are of importance for landfill site management. Sections 27 – 35 state that industries should adopt the “best practicable means” for preventing dust from becoming dispersed or causing a nuisance. The act also empowers owners or occupiers present in the vicinity of the source of dust/nuisance to take or adopt necessary steps or precautions against the nuisance. Where steps have not been prescribed, owners must adopt the “best practicable means” for the abatement of the nuisance. Should any person/s such as for example, waste management service providers, not comply with the necessary steps to prevent owners/occupiers from the effects of dust, the person/s may be liable to pay a dust control levy to the minister.

### **8.3.7 National Water Act (36 of 1998)**

The National Water Act is South Africa’s overarching piece of legislation dealing with water resource management. It contains a number of provisions that impact on waste management, including:

- Ensuring the disposal of waste in a manner, which does not detrimentally impact on water resources.
- Managing the discharge of waste into water resources.

The Act allows the Minister to make regulations for:

- Prescribing waste standards, which specify the quantity, quality and temperature of waste that may be discharged or deposited into or allowed to enter a water resource.
- Prescribe the outcome or effect, which must be achieved through management practices for the treatment of waste before it is discharged or deposited into or allowed to enter a water resource.
- Requiring that waste discharged or deposited into or allowed to enter a water resource be monitored and analysed according to prescribed mechanisms.

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### **8.3.8 Occupational Health and Safety Act (85 of 1993)**

The purpose of the Occupational Health and Safety Act (OHSA) and associated regulations is to provide for the health and safety of persons at work and for the health and safety of persons in connection with the use of plant and machinery; the protection of persons other than persons at work against hazards to health and safety arising out of or in connection with the activities of persons at work; to establish an advisory council for occupational health and safety; and to provide for matters connected therewith.

A sound waste management strategy and planning must take into account the safety of persons involved in the practical implementation thereof, with reference in particular to any waste services carried out by municipal officials; and waste service providers and their employees.

Core to OHSA are the principles and core duties of employers and employees as legislated in Sections 8, 9 and 14 thereof.

Section 8(1) stipulates that “Every employer shall provide and maintain, as far as is reasonable practicable, a working environment that is safe and without risk to the health of his employees”.

Section 9(1) stipulates that “Every employer shall conduct his undertaking in such a manner as to ensure, as far as is reasonably practicable, that persons other than those in his employment who may be directly affected by his activities are not thereby exposed to hazards to their health or safety.” Subsection (2) imposes a similar duty on every self-employed person.

Section 14(a) imposes a duty on every employee at work to take reasonable care for the health and safety of himself and of other person who may be affected by his acts or omissions. An employee is also required to co-operate with his employer concerning his duties in terms of the Act and to obey health and safety rules and procedures laid down by his employer.

In addition the OHSA further protects workers with regard to Hazardous Chemical Substances through specific regulations. Asbestos regulations deal with specific asbestos containing waste management.

It is likely that the OSHA also places an obligation on the Municipality, to ensure that service providers maintain compliant Health and Safety procedures. This would be relevant in the case of outsourced, waste management functions.

### **8.3.9 Health Act (63 of 1977)**

The Health Act focuses on the promotion of the health of the people and the provision of processes to enable this objective to be achieved. Sections 20, 34 and 38 of the Act are relevant to waste management.

Section 20, requires authorities to take lawful and reasonable practical measures to maintain their areas in a hygienic and clean condition to prevent an unhealthy environment for people.

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Sections 34 and 38 of the act authorise the National Minister of Health to make regulations, which may directly impact on waste management.

### **8.3.10 Hazardous Substances Act (15 of 1973)**

The Hazardous Substances Act (15 of 1973) governs the control of substances that may cause ill health or death in humans by reason of their toxic, corrosive, irritant, flammability or pressure effects. The Act provides for the regulation of the storage, handling, labelling and sale of Group I, II, and III hazardous substances. A license is required for an operation that stores, handles and sells Group I substances. Section 29(1) of the Act regulates the disposal of the empty containers, which previously held Group I substances.

No national, local provincial or local municipal regulations have been promulgated under the Act for the on-site management of Group II hazardous substances.

The relevance of the Act with regard to waste management is captured as certain waste types may be categorised into the various groupings under the Act as noted above.

### **8.3.11 National Road Traffic Act (93 of 1996)**

The United Nations (UN) recommendations on the transport of dangerous goods have been used to produce sections of the National Road Traffic Act. In addition, and in terms of other regulations published under the Act, certain South African Bureau of Standards (SABS) Codes of Practice have been incorporated as standard specifications into the National Road Traffic Regulations (GNR 1249 of 13 November 2001). These codes have been based on the UN recommendations, also known as “The Orange Book” and the associated European Agreement concerning the International Carriage of Dangerous Goods by Road Regulations.

The codes of practice so incorporated include e.g. the following:

- SANS 10228:2006 Edition 4.00: The identification and classification of dangerous goods for transport.
- SANS 10229-1:2005 Edition 1.00: Transport of dangerous goods - Packaging and large packaging for road and rail transport Part 1: Packaging.
- SANS 10229-2:2007 Edition 1.00: Transport of dangerous goods - Packaging and large packaging for road and rail transport Part 2: Large packaging.
- SANS 10232-1:2007 Edition 3.00: Transport of dangerous goods - Emergency information systems Part 1: Emergency information system for road transport.
- SANS 10232-2:1997 Edition 1.00: Transportation of dangerous goods - Emergency information systems Part 2: Emergency information system for rail transportation.
- SANS 10232-3:2007 Edition 3.00: Transport of dangerous goods - Emergency information systems Part 3: Emergency response guides.
- SANS 10232-4:2007 Edition 1.01: Transport of dangerous goods - Emergency information systems Part 4: Transport emergency card.
- SANS 10233:2001 Edition 2.00: Transportation of dangerous goods - Intermediate bulk containers.

The transportation of all waste products should adhere to the above where applicable, noting that certain waste/ refuse may be categorised as dangerous goods.

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### **8.3.12 Advertising on Roads and Ribbon Development Act (21 of 1940)**

This act regulates, amongst other things, the depositing or discarding of waste near certain public roads, and the access to certain land from such roads. To the extent as outlined in Proclamation 23 in Government Gazette 16340 of 31 March 1995, the administration of this Act has been assigned to the provinces. In terms of section 8 of the Act, no person shall within a distance of 200 metres of the centre line of a public road deposit or leave outside an urban area, so as to be visible from that road, a disused vehicle or machine or a disused part of a vehicle or machine or any rubbish or any other refuse, except in accordance with the permission in writing granted by the controlling authority concerned. The controlling authority may remove any object or substance referred to found on a public road and may recover the cost of the removal from the person who deposited or left such object or substance there.

When any person has deposited or has left any object or substance in contravention of the above, but not on a public road, the controlling authority concerned may direct the person in writing to remove or destroy that object or substance within such period as may be specified in the direction. If the person fails to comply with that direction, the controlling authority may cause the object or substance to be removed or destroyed and may recover from the said person the cost of the removal or destruction. The preceding provision do not apply to any object or material which has been or is being used for or in connection with farming, or to soil excavated in the course of alluvial digging: provided that this sub-section shall not permit the deposit or leaving of any article or material on a road.

### **8.3.13 Tyre Regulations (R149 of 2009)**

The Waste Tyre Regulations which were published as Government Notice R.149 on 13 February 2009 and came into effect on 30 June 2009. The purpose of the legislation is to regulate the management of waste tyres by providing for the regulatory mechanisms. The regulations apply uniformly in all provinces in South Africa and affect waste tyre producers, waste tyre dealers, waste tyre stockpile owners, landfill site owners and tyre recyclers.

In summary, the regulation:

- Defines a waste tyre as a new, used, retreaded, or un-roadworthy tyre, not suitable to be retreaded, repaired or sold as a part worn tyre and not fit for the original intended use.
- Prohibits recycle, recover or dispose of a waste tyre at any facility or on any site, unless such an activity is authorised by law.
- Prohibits recovery or disposal of a waste tyre in a manner that may or may potentially cause pollution or harm to health.
- Prohibits disposal of a waste tyre at a waste disposal facility, two years from the gazetted date, unless such a waste tyre has been cut into quarters; and prohibits disposal of tyres in five years ; unless these are shredded.
- Provides regulations in terms of tyre producers, tyre dealers and tyre stockpile owners.

### **8.3.14 Asbestos Regulations (R.341 of 2008)**

On 28 March 2008, the Minister of Environmental Affairs and Tourism published as Government Notice R.341 “Regulations for the prohibition of the use, manufacturing, import and export of asbestos and asbestos containing materials” under Section 24B of ECA (thus now the Waste Act). This would have implication for phasing out of asbestos containing material, which may therefore result in higher quantities of asbestos waste.

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### **8.3.15 Mineral and Petroleum resources Development Act (No. 28 of 2002)**

The objective of this act, amongst others, is to give effect to section 24 of the Constitution by ensuring that the nation's mineral and petroleum resources are developed in an orderly and ecologically sustainable manner while promoting justifiable social and economic development.

### **8.3.16 Municipal Structures Act (Act 117 of 1998)**

The main objective of Local Government: Municipal structures Act 117 of 1998 is to provide for the establishment of municipalities in accordance with the requirements relating to categories and types of municipality, to provide for an appropriate division of functions and powers between categories of municipality, to provide appropriate electoral systems and to provide for matters connected therewith.

The functions and powers of municipalities are set out in Chapter 5 of the Act, with a municipality having the functions and power assigned to it in terms of sections 156 and 229 (dealing with fiscal powers and functions) of the constitution.

### **8.3.17 Municipal Systems Act (Act 32 of 2000)**

As intended by the Constitution, Waste management services such as refuse collection, removal, transportation and disposal is generally the responsibility of local municipalities<sup>6</sup>.

Municipal Service with respect to the Local Government Municipal Systems Act (MSA) defines a municipal service as follows:

"A serviced that a municipality in terms of its powers and functions provides or may provide for the benefit of the local community irrespective of whether

- (a) Such a service is provided, or to be provided, by the municipality through an internal mechanism contemplated in section 76 or by engaging an external mechanism contemplate in section 76; and
- (b) fees, charges or tariffs are levied in respect of such a service or not."

Chapter 8 Section 73 - 82 outlines certain general duties on municipalities in relation to the municipal service as highlighted below.

In terms of section 75(1), a municipality must give effect to the provisions of the Constitution and must:

- Give priority to the basic needs of the local community.
- Promote the development of the local community.

Ensure that all members of the local community have access to at least the minimum level of available resources and the improvement of standards of quality over time.



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In terms of section 75(2), municipal services must – be equitable and accessible; be provided in a way, which promotes the prudent, efficient and effective use of available resources and the improvement of standards of quality over time; be financially sustainable; be environmentally sustainable, and be regularly reviewed with a view to upgrading, extension and improvement.

Section 74 regulates tariff policy in respect of municipal services. A municipality is obliged to adopt and implement a tariff policy on levying fees for municipal services. A municipality's tariff policy must reflect at least the following principles:

- People who use municipal services must be treated equitably in the application of tariffs.
- In general terms, what individual users pay for services should be in proportion to their use of the services.
- Poor households must have access to at least basic services. Different ways of providing for this are suggested, for example lifeline tariffs and subsidisation.
- Tariffs must reflect the costs reasonable associated with providing the service for example capital, operating, maintenance, administration and replacement costs and interest charges.
- Tariffs must be set at levels which allow the service to be financially sustainable.
- In appropriate circumstances, surcharges on tariffs may be allowed.
- Special tariffs may be set for categories of commercial and industrial users in order to promote local economic development.
- The economical, efficient and effective use of resources must be promoted, as well as the recycling of waste and other appropriate environmental objectives
- Any subsidisation of tariffs should be fully disclosed.

Section 78 prescribes the process which municipalities must follow when they decide through which mechanism to provide a municipal service in their areas. There are particular provisions, which a municipality must comply with when it provides a municipal service through a service delivery agreement with what the MSA terms “external mechanisms”.

The MSA contains extensive provisions pertaining to public participation. In particular, the community has the right to contribute to decision-making processes by its municipality. A municipal council must establish appropriate mechanisms, processes and procedures to enable residents, communities and stakeholders in the municipality to participate in the local affairs. It is pertinent to reiterate that waste management services as provide by the municipality is an integral part of local affairs.

As such municipalities' mechanisms must provide for:

- The receipt, processing and consideration of petitions and complaints lodged by residents, communities and stakeholders in the municipality.
- The receipt, processing and consideration of written objections and representations with regard to any matter to which it is required to invite public comment.
- Public meetings of residents, on a ward or any other basis.
- Public hearings by the council and its committees when appropriate.
- Surveys among residents when appropriate and the processing and publication of the results.

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### 8.3.18 Development Facilitation Act (Act 67 of 1995)

The Development Facilitation Act provides specific principles for:

- Land development and conflict resolution.
- Controls on land occupation.
- Recognition of informal land-development practices.

These principles are set out in sections 3 and 4 of the Development Facilitation Act and form the basis for most of the integrated development plan. Chapter one of the Development Facilitation Act sets out principles which affect all decisions relating to the development of land.

This means that whenever a municipality, a development tribunal, a Member of the Executive Council (MEC) or any other authority is considering an application for the development of land, they must make sure that their decision is consistent with these principles. Any integrated development plan must, in terms of the Local Government Transition Act, be based on these principles too.

The Development Facilitation Act's principles form the basis of integrated development planning - in particular the land-development objectives. In terms of section 2 of the Act, the general principles which are set out in section 3 of the Act include:

- Policy, administrative practice and the law should promote efficient and integrated land development in that they:
- Promote the integration of the social, economic, institutional and physical aspects of land development.
- Promote integrated land development in rural and urban areas in support of each other.
- Encourage environmental sustainable land development practices and processes.
- Members of communities affected by land development should actively participate in the process of land development.
- Policy, administrative practice and laws should encourage and optimize the contributions of all sectors of the economy (government and non-government) to land development so as to maximize the Republic's capacity to undertake land development.
- Laws, procedures and administrative practice relating to land development should:
- Be clear and generally available to those likely to be affected thereby.
- In addition to serving as regulatory measures, also provide guidance and information to those affected thereby.
- Be calculated to promote trust and acceptance on the part of those likely to be affected thereby.
- Give further content to the fundamental right set out in the constitution.
- Policy, administrative practice and laws should promote sustainable land development at the required scale, in that they should, inter alia, promote sustained protection of the environment.
- Policy, administrative practice and law should promote speedy land development.
- Each proposed land development area should be judged on its own merits and no particular use of land, such as residential, commercial, conservation, industrial, community facility, mining, agricultural or public use, should in advance or in general, be regarded as being less important or desirable than any other use of land.

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- A competent authority at national, provincial and local government level should co-ordinate the interests of the various sectors involved in or affected by land development so as to minimize conflicting demands on scarce resources.

#### **8.3.19 The Physical Planning Act (Act 125 of 1991)**

The objective of the Physical Planning Act 125 of 1991 is to provide for the division of the country into regions and to promote regional development. Policy plans consist of broad guidelines for the future physical development of the area and restrictions are placed on the use of land in the area to which the plan relates. Local authorities are required to develop urban structure plans for their areas of jurisdiction.

#### **8.3.20 Promotion of Administrative Justice, (Act 3 of 2000)**

The purpose of the Promotion of Administrative Justice Act (“PAJA”) is principally to give effect to the right to administrative action that is lawful, reasonable and procedurally fair; and to the right to written reasons for administrative action as contemplated in section 33 of the Constitution; and to provide for matters incidental thereto.

Administrative law governs the relationships between public bodies, and between public and private bodies and/or individuals. Many activities which affect the environment, including certain waste management activities, require authorisation from a public body. Because environmental conflicts may arise during the authorisation process from the exercise of administrative decision-making powers, administrative law principles are of particular relevance to environmental law generally, and specifically in the context of the environmental authorisation requirements stipulated by the provisions of section 24 of the NEMA read with its subordinate legislation regulating environmental impact assessment (or “EIA”).

#### **8.3.21 Promotion of Access to Information, (Act 2 of 2000)**

Closely linked to the notion of administrative justice is the right of access to information. Without access to information, a person may be unable to determine whether or not his or her right to just administrative action (or to an environment not harmful to human health or well-being or, for that matter, any other Constitutional right) has been infringed. The purpose of the Promotion of Access to Information Act (“PAIA”) is to give effect to the Constitutional right of access to any information held by the State and any information that is held by another person and that is required for the exercise or protection of any rights, and to provide for matters connected therewith.

### **8.4 National Policies and Guidelines**

#### **8.4.1 White Paper on Environmental Waste Management (749 of 1998)**

The White Paper on Environmental Management was published in 1998. This policy sets out government’s objectives in relation to environmental management, how it intends to achieve its objectives, and to guide government agencies and organs of state in developing strategies to meet their objectives.

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The policy document is an overarching policy framework that refers to all government institutions and to all activities that impact on the environment. The policy states that government will allocate functions to the institutions and spheres of government that can most effectively achieve the objectives of sustainable development and integrated environmental management. This would include the allocation of certain functions to the municipal sphere of government. Where appropriate, provincial and local governments are to develop their own legislation and implementation strategies in order to address their specific needs and conditions within the framework of the policy.

#### **8.4.2 White Paper on Integrated Pollution and Waste Management (DEAT, 2000)**

The White Paper on Integrated Pollution and Waste Management (1999) is a subsidiary policy of the overarching environmental management and constitutes South Africa's first policy document focused on integrated waste management. This national policy set out Government's vision for integrated pollution and waste management in the country and applies to all government institutions and to society at large and to all activities that impact on pollution and waste management.

Integrated pollution and waste management is defined as a holistic and integrated system and process of management aimed at pollution prevention and minimisation at source, managing the impact of pollution and waste on the receiving environment and remediating damaged environments. Waste management is to be implemented in a holistic and integrated manner and extend over the entire waste cycle from cradle-to-grave and will include the generation, storage, collection, transportation, treatment and the final disposal of waste.

The overarching goal reflected in the policy, is integrated pollution and waste management. The intention is to move away from fragmented and uncoordinated pollution control and waste management, towards an approach that incorporates pollution and waste management as well as waste minimisation.

Within this framework, the following strategic goals apply:

- Effective institutional framework and legislation.
- Pollution and waste minimisation, impact management and remediation.
- Holistic and integrated planning – the intention is to develop mechanisms to ensure that integrated pollution and waste management considerations are integrated into the development of government policies, strategies and programmes as well as all spatial and economic development planning processes and in all economic activity.

The strategic mechanisms include the following:

- The incorporation of integrated environmental management principles and methodologies in spatial development planning as it relates to pollution and waste management.
- Making timeous and appropriate provision for adequate waste disposal facilities.
- Developing management instruments and mechanisms for the integration of pollution and waste management concerns in development planning and land allocation.
- Developing appropriate and agreed indicators to measure performance for inclusion in Environmental Implementation Plans and Environmental Management Plans as provided for in the National Environmental Management Act.
- Participation and partnerships in integrated pollution and waste management governance.

- Empowerment and education in integrated pollution and waste management.
- Information management.
- International co-operation.

### 8.4.3 National Waste Management Strategy (2011)

The first NWMS was published in 1999 by the then DEAT and the then DWAF. It was the first strategy for addressing South Africa's waste management challenges. The strategy effectively defines South Africa's vision for waste management highlighting themes such as "cradle to grave" management of waste products and the waste management hierarchy which encourages waste disposal only as a last resort.

The NWMS has recently (2011) been revised in line with Chapter 2, Part 1, of the Act which requires the establishment of a NWMS within two years of the Act coming into effect. Significant changes include the addition of "remediation" to the waste management hierarchy, and the consolidation of what was previously many different action plans into a single action plan.

The new strategy defines eight strategic goals with a number of targets, as presented in the table below.

**Table 23: Goals and targets of the NWMS (2011)**

Goal	Description	Targets 2016
Goal 1	Promote waste minimisation, re-use, recycling and recovery of waste.	<ul style="list-style-type: none"> <li>• 25% of recyclables diverted from landfill sites for re-use, recycling or recovery.</li> <li>• All metropolitan municipalities, secondary cities and large towns have initiated separation at source programmes.</li> <li>• Achievement of waste reduction and recycling targets set in IndWMPs for paper and packaging, pesticides, lighting (CFLs) and tyre industries</li> </ul>
Goal 2	Ensure the effective and efficient delivery of waste services.	<ul style="list-style-type: none"> <li>• 95% of urban households and 75% of rural households have access to adequate levels of waste collection services.</li> <li>• 80% of waste disposal sites have permits.</li> </ul>
Goal 3	Grow the contribution of the waste sector to the green economy.	<ul style="list-style-type: none"> <li>• 69 000 new jobs created in the waste sector</li> <li>• 2 600 additional SMEs and cooperatives participating in waste service delivery and recycling</li> </ul>
Goal 4	Ensure that people are aware of the impact of waste on their health, well-being and the environment.	<ul style="list-style-type: none"> <li>• 80% of municipalities running local awareness campaigns.</li> <li>• 80% of schools implementing waste awareness programmes.</li> </ul>
Goal 5	Achieve integrated waste management planning.	<ul style="list-style-type: none"> <li>• All municipalities have integrated their IWMPs with their IDPs, and have met the targets set in IWMPs.</li> <li>• All waste management facilities required to report to</li> </ul>

Goal	Description	Targets 2016
		SAWIC have waste quantification systems that report information to WIS.
Goal 6	Ensure sound budgeting and financial management for waste services.	<ul style="list-style-type: none"> <li>All municipalities that provide waste services have conducted full-cost accounting for waste services and have implemented cost reflective tariffs.</li> </ul>
Goal 7	Provide measures to remediate contaminated land.	<ul style="list-style-type: none"> <li>Assessment complete for 80% of sites reported to the contaminated land register.</li> <li>Remediation plans approved for 50% of confirmed contaminated sites.</li> </ul>
Goal 8	Establish effective compliance with and enforcement of the Waste Act.	<ul style="list-style-type: none"> <li>50% increase in the number of successful enforcement actions against non-compliant activities.</li> <li>800 EMLs appointed in the three spheres of government to enforce the Waste Act.</li> </ul>

The overall objective of this strategy is to reduce the generation of waste and the environmental impact of all forms of waste and thereby ensure that the socioeconomic development of South Africa, the health of the people and the quality of its environmental resources are no longer adversely affected by uncontrolled and uncoordinated waste management.

The internationally accepted waste hierarchical approach was adopted of waste prevention/minimization, recycle/reuse, treatment and finally disposal. The strategy outlines the functions and responsibilities of the three levels of government and where possible, firm plans and targets are specified.

Action plans have been developed for reaching all of the eight goals.

#### 8.4.4 Polokwane Waste Summit Declaration (2001)

During September 2001 a national waste summit was held at Polokwane, in the Northern Province. It was attended by key stakeholder groupings in the waste field in order to jointly chart a way forward in terms of national waste management. The resultant Polokwane Declaration includes a vision and goal for the management of all waste, i.e. domestic, commercial and industrial:

**Vision** – To implement a waste management system that contributes to sustainable development and a measurable improvement in the quality of life, by harnessing the energy and commitment of all South Africans for the effective reduction of waste.

**Goals** - To reduce waste generation and disposal by 50% and 25% respectively by 92012 and develop a plan for zero waste by 2022

Key actions in the Polokwane Declaration include the following:

- Implement the National Waste Management Strategy.
- Develop and implement legislative and regulatory framework.
- Waste reduction and recycling.

- Develop waste information and monitoring systems.

#### 8.4.5 Local Government Turnaround Strategy (2009)

Cabinet approved the Local Government Turnaround Strategy (LGTAS) on the 3 December 2009 in Pretoria. The LGTAS recognised that each municipality faces different social and economic conditions and has different performance levels and support needs. Thus a more segmented and differentiated approach was required to address the various challenges of municipalities. In addition cabinet recognised that the problems in Local Government are both a result of internal factors within the direct control of municipalities as well as external factors over which municipalities do not have much control. (Department of Cooperative Governance and Traditional Affairs, Dec 2009.)

The LGTAS identifies the internal factors related to for example the following:

- Quality of decision-making by Councillors.
- Quality of appointments.
- Transparency of tender and procurement systems and levels of financial management and accountability.
- Levels of financial management and accountability.

The external factors relate to:

- Revenue base and income generation potential.
- Inappropriate legislation and regulation.
- Demographic patterns and trends.
- Macro and micro-economic conditions.
- Undue interference by political parties and weaknesses in national policy.
- Oversight and Inter-Governmental Relations.

Ultimately the aim of the LGTAS is to:

- Restore the confidence of the majority of our people in our municipalities, as the primary delivery machine of the developmental state at a local level.
- Re-build and improve the basic requirements for a functional, responsive, accountable, effective, and efficient developmental local government.

The LGTAS sets out five strategic objectives with associated key interventions. Probably most relevant in the context of waste management is the first objective, i.e. to *“Ensure that municipalities meet basic needs of communities. This implies that an environment is created, support provided and systems built to accelerate quality service delivery within the context of each municipality’s conditions and needs”*.

Interventions to achieve the various objectives include better organisation by National Government and improved support and oversight from provinces in relation to Local Government. Furthermore municipalities are to reflect on their own performance and tailor-made turnaround strategies, while all three spheres of governments should improve inter-governmental relations. Also, political parties are to promote and enhance institutional integrity of municipalities and a social compact on Local Government where all citizens are guided in their actions and involvement by a common set of governance values.

In terms of the LGTAS an immediate task is for agreements to be reached with each province on the roll-out programme to establish different provincial needs and capacities, which will guide how municipalities are to be supported to prepare and implement their own tailor-

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made turnaround strategies that must be incorporated into their IDPs and budgets (by March 2010). Key stakeholders and ward committees were to be mobilised early in 2010. By July 2010, all municipalities were to be in full implementation mode of the national and their own Turn-around Strategies. (Department of Cooperative Governance and Traditional Affairs, Dec 2009.)

#### **8.4.6 Draft Municipal Sector Plan (2011)**

The first Draft Municipal Sector plan was published for public comment on 6 April 2011 by the Minister of Environmental Affairs (notice 182 of Government Gazette 34167 dated 30 March 2011).

The draft plan is based on the findings of a study commissioned in 2007 and is informed by the local government turnaround strategy of 2009, which seeks to address the root causes of poor performance and dysfunctionality at municipal level. The draft plan forms an appendix to a report on the municipal waste sector and seeks to “effectively” address the management of “backlogs” in municipal solid waste service delivery and infrastructure.

An introduction to the report states that, in an attempt to fast track service delivery, cabinet directed all sector departments to account for service backlogs and develop service plans to address them. The draft plan identifies short-, medium- and longer-term objectives over a period of fifteen years and includes strategies for:

- Collecting recyclable waste (both by way of curbside collection and at drop-off facilities).
- Composting.
- Energy recovery.
- Reducing waste-to-landfill.
- Cleaner production principles for industry.
- Alternative technologies for “different waste streams.”
- Establishing cooperatives to formalise picking at landfills as a livelihood.

According to the report and related draft plan, it is envisaged that municipal waste management should be closely aligned with National Environmental Management: Waste Act 59 of 2008.

With regard to municipalities this act affects:

- Standards for removing, storing and disposing of waste (including separation, compacting and treatment).
- Litter control.

Related institutional and planning arrangements as informed by:

- Municipal Structures Act 117 of 1998.
- Municipal Systems Act 32 of 2000.

#### **8.4.7 Minimum Requirements Documents; Department of Water Affairs and Forestry (1998 and 2005)**

The DWAF Minimum Requirements: Waste Management Series were formulated in the form of guideline documents as a joint venture between DWAF and the Department of Environmental Affairs and Tourism (DEAT).



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The objective of the Minimum Requirements is to establish a framework for standards for waste management in South Africa. The former DWAF published the second edition of the Minimum Requirements series in 1998, consisting of the following three documents:

- Document 1: Minimum Requirements for the Handling, Classification and Disposal of Hazardous Waste.
- Document 2: Minimum Requirements for Waste Disposal by Landfill.
- Document 3: Minimum Requirements for Monitoring at Waste Management Facilities.

The third edition was released in draft form in 2005, but only Document 1 (DEAT, 2005) has been finalised.

The Minimum Requirements provide applicable waste management standards or specifications that should be met, as well as providing a point of departure against which environmentally acceptable waste disposal practices can be assessed. The objectives of setting Minimum Requirements are to:

- Prevent water pollution and to ensure sustained fitness for use of South Africa's water resources.
- Attain and maintain minimum waste management standards in order to protect human health and the environment from the possible harmful effects caused by the handling, treatment, storage and disposal of waste.
- Effectively administer and provide a systematic and nationally uniform approach to the waste disposal process.
- Endeavour to make South African waste management practices internationally acceptable.
- Ensure adherence to the Minimum Requirement conditions from the permit applicant, before a waste disposal site permit is issued.
- Promote the hierarchical approach to waste management, as well as a holistic approach to the environment.

The series formed the basis for the permitting process that had been required in terms of Section 20 of the ECA. The requirements, standards and procedures covered in the series had generally been included as permit conditions, thereby becoming legally binding on the permit holder. In addition to requirements for the establishment and operation of a landfill site, the permit holder was generally required to operate, maintain and attend to the closure of a waste disposal site in compliance with the permit conditions, as well as in accordance with the guidelines set out in the Minimum Requirements documents. Note that an EIA must be conducted prior to the establishment of waste disposal facilities. However, the above mentioned waste activity has now been repealed and instead requires a license application under the Waste Act.

The third edition was released in draft form in 2005, but only Document 1 (DEAT, 2005) has been finalised.

#### **8.4.8 National Policy for Basic Refuse Removal Services to Indigent Households**

The National Policy for the Provision of Basic Refuse Removal Services to Indigent Households (GN No. 34385) was published in the Government Gazette in June 2011.

The purpose of this policy is to ensure that indigent households have access to at least a basic refuse removal (BRR) service.

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This Policy aligns to existing relevant legislation, as in accordance to 74 (2)(c) of the Municipal Systems Act, 2000 (Act No. 32 of 2000) poor households must have access to at least basic services and section 9 (2) of NEMWA (Act 59 of 2008) which stipulates that each municipality must exercise its executive authority and perform its duty in relation to waste services, including waste collection, waste storage and waste disposal, by (c) ensuring access for all to such services.

The objectives of the policy are to identify households that can be enrolled for the BRR service, establish bylaws to enforce tariff policies that will support the BRR service and to raise awareness within the municipality with regard to correct handling of domestic waste for BRR and the need to minimize waste and recycle.

Implementation plans include each municipality:

- declaring specific localities as the recipients of basic refuse removal services;
- maintaining “accurate and updated” registers of indigent people;
- taking action in the event of malpractice;
- integrating basic refuse removal into “basic indigent policies”;
- designating the administration of the policy to the “most appropriate department”;
- and
- raising awareness.

The policy includes a “grid of responsibilities” for each sphere of government and a policy monitoring and evaluation plan. According to the grid of responsibilities, national government will take responsibility for building capacity at provincial and municipal level, with provincial government determining municipal capacity and assisting district municipalities in “drawing up guidelines”.

#### **8.4.9 National Policy in Thermal Treatment of General and Hazardous Waste**

The Thermal Waste Treatment of General and Hazardous Waste Policy was gazetted (GN No. 32439) for public comment on 30 January 2009 and published under the NEMWA on 24 July 2009. The policy presents the Government’s position on thermal waste treatment as an acceptable waste management option in South Africa. It also provides the framework within which incineration and co-processing treatment technologies of general and hazardous waste should be implemented in the country.

All Government Departments across the different spheres of government must consider this policy in their decision making on matters pertaining to thermal treatment of waste.

The policy presents objectives which vary thematically. These consider the integration of thermal waste treatment into the integrated waste management system. Schedules one to four provide guidelines on the following:

##### **(I) Air Emission Standards – Waste Incineration**

Listed air emission standards for general and hazardous waste incinerators, brought into operation subsequent to the final gazetting of this policy, to be complied with until the formalisation of The Minimum Emission Standards in terms of Section 21 of the National Environmental Management: Air Quality Act of 2004.

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(m) Air Emission Standards – AFR Co-Processing

The Minimum Emission Standards for Alternative Fuels and Raw Materials (AFR) co-processing is currently in the process of being formalised in terms of Section 21 of the National Environmental Management: Air Quality Act of 2004. In the interim this policy constitutes the air emission standards for all cement kilns co-processing AFR.

(n) Waste Excluded from Co-Processing

Listed types of waste that are not allowed to be received, stored, handled or co-processed in cement kilns.

(o) Conditions of Environmental Authorisation

Any cement plant co-processing general or hazardous waste as alternative fuels and/or raw materials, and any dedicated general and/or hazardous waste incinerator must have the relevant approvals from the competent authority. This schedule includes notes on operational management, air quality management, waste management and monitoring and reporting.

#### **8.4.10 National Waste Information Regulations (GR 625 of 2012)**

The National Waste Information Regulations came into effect on 01 January 2013. These cover registration of persons who conduct certain waste management activities and their duty to keep records.

#### **8.4.11 National Policy for the provision of basic refuse removal services to indigent households**

The National Policy for the provision of basic refuse removal services to indigent households as published for general information in notice 413 of Government Gazette No. 34385 on 22 June 2011 was developed in response to the constitutional requirement that all households should have access to basic services regardless of their income level, as well as the adoption of a free basic services in 2001.

This Policy aligns to existing relevant legislation, as in accordance to 74 (2)(c) of the Municipal Systems Act, 2000 (Act No. 32 of 2000) poor households must have access to at least basic services and section 9 (2) of NEMWA (Act 59 of 2008) which stipulates that each municipality must exercise its executive authority and perform its duty in relation to waste services, including waste collection, waste storage and waste disposal, by (c) ensuring access for all to such services.

Implementation plans include each municipality:

- Declaring specific localities as the recipients of basic refuse removal services.
- Maintaining “accurate and updated” registers of indigent people taking action in the event of malpractice.
- Integrating basic refuse removal into “basic indigent policies.”
- Designating the administration of the policy to the “most appropriate department.”
- Raising awareness.

The policy includes:

- A “grid of responsibilities” for each sphere of government.

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- A policy monitoring and evaluation plan.

According to the grid of responsibilities, national government will take responsibility for building capacity at provincial and municipal level, with provincial government determining municipal capacity and assisting district municipalities in “drawing up guidelines”.

#### **8.4.12 National Domestic Waste Collection Standards (GN21, 21 Jan 2011)**

The National Domestic Waste Collection Standards (notice 21 of Government Gazette 33935, 21 January 2011) published under the National Environmental Management: Waste Act (Act No. 59 of 2008) came into effect on Tuesday, 1 February 2011.

This standard aims to provide a uniform framework within which domestic waste should be collected in South Africa. This comes after a consultative process with provinces, municipalities and the general public in order to redresses the past imbalances in the provision of waste collection services. The standards aim to guide municipalities on how to provide acceptable, affordable and sustainable waste collection service to the human health and the environment.

The standards covers the levels of service, separation at source (between recyclable and non-recyclable materials), collection vehicles, receptacles, collection of waste in communal collection points, and most importantly the frequency of collection. Non-recyclable material such as perishable food waste must be collected at least once a week and recyclable material such as paper, plastic, glass etc. must be collected once every two weeks. Municipalities have a choice to provide different types of bins taking into consideration the type of vehicles they use; however, they must be rigid and durable to prevent spillage and leakage.

The development of the standards took into consideration the existing innovative practices at local government level across the country and seeks to build on what has already been achieved whilst emphasizing a need to separate recyclable and non-recyclable domestic waste and the protection of human health and the environment.

#### **8.4.13 National Norms and Standards for Assessment of Waste for Landfill Disposal (GR635, 23 Aug 2013)**

These norms and standards require the assessment of waste prior to disposal at landfill. The assessment of waste before disposal must include identification of the total and leachable concentrations of different chemicals. The concentration of chemicals determines the classification of the waste which in turn dictates the type of disposal site where the waste can be disposed of.

#### **8.4.14 Waste Classification and Management Regulations (GR635, 23 Aug 2013)**

The Waste Classification and Management Regulation aims to address the management of different waste categories. The regulations stipulate the requirements for the transport storage and treatment of different waste types. A list of requirements for record keeping by waste generators is also included in the regulations with the aim of improving and standardising record keeping. The regulations also detail the process to be followed when motivating why a listed waste management activity does not require a waste management license.

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#### **8.4.15 National Norms and Standards for Disposal of Waste to Landfill (GR636, 23 Aug 2013)**

These norms and standards specify minimum engineering design requirements for landfill sites. The design requirements vary depending on the type of waste to be disposed of at the site.

Landfill sites are designed to comply with one of four designs (Class A – Class D). The landfill design classes vary in the types of liner used. Class A landfill sites require multiple linings and leachate collection systems whereas a Class D landfill site is much simpler in design requiring only a 150 mm base preparation layer. Different classes of landfill are required for different types of waste.

#### **8.4.16 National Norms and Standards for the Storage of Waste (GN 926, Nov 2013)**

These standards specify the minimum requirements for waste storage facilities in the interest of protection of public health and the environment. The standards aim to ensure that waste storage facilities are managed according to best practise and to provide a minimum standard for the design and operation of new and existing waste storage facilities.

Hazardous waste storage facilities should be located in areas zoned as industrial, where waste storage facilities are located in residential areas a buffer of at least 100 m must be assigned to the site. General waste storage facilities must be located in an area that is easily accessible by the public.

The standards also specify design requirements for waste storage facilities, these include:

- Access roads
- Signage at the entrance of the facility in at least three official languages applicable to the areas the facility is located in. The sign must indicate:
  - The risk associated with entering the site.
  - Hour of operation.
  - Name, address and telephone number of the person responsible for the operation of the facility.

The standards also require that waste is separated at source into recyclables and non-recyclables.

A new condition for the management of waste storage facilities is the requirement for bi-annual internal audits and biennial external audits

### **8.5 Local Strategy and Policies**

#### **8.5.1 Nquthu Local Municipality Integrated Development Plan (IDP 2012-2017)**

The NLM aspires to “Be the champions of sustainable local economic and community development through good governance”. The main purpose of NLM IDP is to improve the quality of life of all its citizen. The NLM IDP is the principal strategic planning instrument and informs all other key institutional policy documents, implementation plans and planning processes, such as its budgets, business plans and service delivery and budget

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implementation plans. It ensures horizontal and vertical co-ordination and integration across the three spheres of government.

The IDP provides the basis for the managed development of NLM and is used by the political, business and community leadership to determine activities and operational plans and guide the allocation of resources until and beyond 2017. The IDP is the foremost plan in pursuance of the current vision:

The IDP includes the following objectives with regard to waste management:

- Develop an IWMP which will address the following:
  - An environmental impact assessment of waste management options
  - An evaluation of environmentally friendly practices for re-cycling and landfill
  - Identification of economic opportunities associated with recycling.

### **8.5.2 Municipal By-laws**

Chapter 7 of the South African constitution: Section 156 provides that a municipality may make and administer by-laws for the effective administration of matters which it has the right to administer and that (section 151) it shall not be in conflict with national or provincial legislation.

This is further supported in the municipal systems act (Act 32 of 2000), Chapter 3: section 11 for a municipality to exercise executive authority within its boundaries to implement applicable by-laws. Section 75 of the MSA provides for the municipal council to adopt by-laws to give affect and enforce its tariff policy.

The Draft Municipal Sector Plan (Notice 182 of Government Gazette 34167) was published by the Minister for public comment on the 30 March 2011. Section 3.3.9.5 motivates that the enforcement of municipal waste by-laws is required to address ineffective collection systems through the enforcement of available resource-based controls which will improve the situation at community level. Enforcement should further be placed with a dedicated section with trained Environmental Management Inspectors in line with Chapter 7 of the National Environmental Management Act, 1998 (Act107 of 1998).

The NLM does not currently have waste management by-laws. It is recommended that Nquthu draft waste management by-laws. The by-laws should contain at least the following sections:

- Collection and removal of waste.
- Littering and illegal dumping.
- Access to landfill sites and permitted waste types.
- Waste minimisation and recycling.
- Hazardous and HCRW.
- Categories of waste. – an explanation of the different categories of waste.
- Separation of waste – households and businesses should be required to separate out the recyclable component of their waste stream.
- Registration of waste transporters – key generators and transporters of waste should be required to register with the municipality and provide regular information on waste stream composition and quantities.
- Schedule of fines
- HCRW - By-laws should address the management of HCRW and hazardous waste within the Municipality. The province is the regulatory body when it comes to medical

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waste from hospitals but the municipality has the responsibility to make sure that all businesses including hospitals and doctors report on waste disposal.

- The Waste Avoidance Hierarchy must be incorporated in a relevant manner into the by-laws, even if only briefly and simplistically.

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## Appendix A

### Policy and Legislation



## NQUTHU IWMP COMMENTS AND RESPONSES REPORT

No	Date	Name and organisation	Issues/ comments	Response by the Environmental Consultant
1	06/03/2015	Mr Joseph Ntshalintshali Control Environmental Officer: Pollution and Waste Management. Department of Economic Development, Tourism and Environmental Affairs	Page 12. 2.11 General description: the IWMP has to include the description of the town's infrastructure and wards that are within the NLM (Ref DEA, Guideline for the development of IWMPs page 15).	The description of the municipality has been updated.
			Page 13 2.1.2 Demographics: h) housing. Approximately 63% of households in the NLM are classified as the agricultural households. Request the clarity of the classification of the households as agricultural.	The data quoted is from Stats SA. Stat's SA defines an agricultural household as any household involved in agriculture. The definition of agriculture used by Stats SA cover growing crops, raising livestock, utilisation of forestry and fisheries resources.
			Page 15. Last paragraph: Nondweni landfill site inspection. There have been issued with the HCRW from hospital being mixed with general waste. Is this incident a recent observation at the Nondweni landfill site or the incident is confused with one that happened at the old Nquthu dumpsite in 2011?	The reference to HCRW is an error. The report is referring to the incident that occurred in 2011.
			Page 16: 2.3.2 Drop off centres. There is no dedicated recycling drop off centres in the NLM. To include the Nquthu buy back centre project that is being proposed.	The IWMP has been updated with details of the buyback centre.
			Page 18. 2.4.4 Waste management fleet. Transportation of waste to Glencoe landfill site. To note that Nquthu waste is no longer transported to Glencoe landfill site, but all waste collected from Nquthu is disposed of at the Nondweni site.	Noted. The IWMP has been updated accordingly.

Page 19. 2.5.3 a) Nquthu landfill site. Last paragraph.... Violation of the permit conditions. Based on information this office has, Nquthu dump site does not have a permit. Also note that Nquthu waste is no longer transported to Glencoe landfill site, but all waste collected from Nquthu is disposed of at the Nondweni dumpstie.	The Nquthu landfill site is permitted. A permit was obtained from the South African Waste Information System. The site was permitted on 20/06/2002 by Department of Water Affairs and Forestry. The permit number is 16/2/7/W214/D2/Y1/P471.
Page 20. Table 7. Permit status = Permitted. Old Nquthu dumpsite is not permitted	Refer to the comment above.
Page 24. 2.6.1. Illegal dumping. The IWMP has to indicate all major illegal dumping hotspots within the NLM.	A review of illegal dumping hotspots was not part of the scope of this IWMP. This needs to be an on-going activity and the location of hotspots updated regularly. A project under section 3.2 of the implementation plan has been included which involves an annual illegal dumping survey.
Page 25. 2.7.1 Waste management staff. The IWMP has to provide the organisation structure responsible for waste management, including the number of vacancies.	The organogram has been added to the IWMP.
Page 27. 2.7.2 Economic and finances. The IWMP has to include the most recent as well as future budget for all waste management services provided by Nquthu local municipality.	The official municipal budget for 2014/2015 was reviewed. It reflects a one line item for “waste management” with the following amounts indicated: 2014/15: R1,384,000 2015/16: R1,462,000 2016/17: R1,541,000 A detailed breakdown of the waste management budget was not available at the time of this IWMP.
Page 36 and 37. Institutional and service issues. The IWMP has to identify the financial gaps and needs with respect to waste management	No detailed breakdown of the waste management budget was available, nor were previous waste management budgets.




			<p>Page 45. 4.2.5 Waste collection objectives. Line number 9. Extending waste services to.....</p> <p>It is suggested that the local nodal areas (the local ranks and the governmental pension points) that have high waste generation are to be addressed in this section).</p>	<p>The IWMP has been updated to propose extending waste collection services to a ward closest to Nquthu. Communal skips will be placed in these areas and emptied by compactors. If the use of communal skips is successful other areas will targeted.</p>
			<p>General: The IWMP has to provide information on complaints received with respect to the waste management including the corrective action as well as mitigation actions taken from both existing and those which may be received in future.</p>	<p>The complaints register was requested from Nquthu local municipality but has not yet been received.</p>
2	11/03/2015	Ms Bongekile Bongile Mthimkhulu. Control Officer – Local Government Support (CEO-LGS) Umzinyathi District.	<p>Page 29...last line</p> <p>The DEA Youth Jobs in Waste Programme (YJW) under Environmental Protection and Infrastructure Programme (EPIP) recruited 17 Nquthu Local Municipality beneficiaries on a one year contract which was extended to end in August 2015. The further extension of the programme is the wish for DEA. The beneficiaries were grouped into Landfill Site Assistants, Waste Data Capturers and Awareness Campaigners. The landfill site assistants and data captures had to be diverted into awareness campaigners because Nquthu and Nodweni Landfill Sites were not operating. Hence the anticipation that YJW beneficiaries will undertake the awareness campaigns. It is best to advise that the Municipality has its own awareness programme for continuity when the JYW Programme comes to an end.</p>	<p>Noted, the report has been updated. The Nondweni landfill site is now operational again so the role of working on landfill sites has been left in the project detail.</p>
			<p>Page 30...table</p> <p>Food for Waste Programme is funded by COGTA and the partner is COGTA (and not DEA)</p>	<p>Noted and corrected in the report.</p>

		<p>Page 30-31 DEA's Environmental Protection and Infrastructure Programme (EPIP) – 3 projects implemented in Nquthu</p> <p>Project Name: KZN Youth Jobs in Waste Budget: 67m (entire KZN) Project detail: The 17 beneficiaries were grouped into Landfill Site Assistants, Waste Data Capturers and awareness Campaigners. (as addition to what is in the draft)</p> <p>Project Name: KZN Nquthu Buyback Centre Budget: R7m Description: About 99 beneficiaries were recruited to develop a buy back centre</p> <p>Project Name; KZN Nquthu Land Rehabilitation R15m Budget: R15m Description: About 193 beneficiaries were recruited to rehabilitate dongas in severely affected areas.</p>	Noted, the report has been updated with the project details.
		<p>Page 42...last line and page 49...1.1 Mr Gcabashe was formally designated as the WMO for Nquthu LM.</p>	Noted and correct in the report.
		<p>Page 52...5.7 May I suggest that the collection route with collection schedule be documented and be made available to the public. (example of a pamphlet)</p>	Project 7.4 has been updated to include the requirement for a refuse collection schedule to be included in the "How to handle your waste" leaflet.
		<p>Consideration: a chipper at the landfill site or transfer station for garden refuse for composting.</p>	Project 4.4 has been added to the implementation plan which addresses the use of a chipper at the Nondweni landfill site.

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**CLIENT** : Nquthu Local Municipality  
**PROJECT NAME** : Nquthu Integrated Waste Management Plan  
**PROJECT No.** : J34045  
**TITLE OF DOCUMENT** : Nquthu Integrated Waste Management Plan  
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DATE <b>May 2015</b>	SIGNATURE 	SIGNATURE 	SIGNATURE 		

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